

# PLAYERS' MOTIVATIONS TO PARTICIPATE THE MOBILE GAME DESIGN WITH THE GAME CREATOR

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The thesis investigates the players' motivations to participate in the innovation process of mobile game design. The topics of the thesis are mobile game, online community, and user-centered innovation. Although many researchers have studied the fields, there is not enough research looking into the practice of user-centered innovation and the role of online community in the mobile game industry. Meanwhile, mobile game creators seek for players' feedback and ideas to improve games and, further, players' loyalty.

Thus, the thesis attempts to present a new model to demonstrate the motivations. The model provides the insights to explore the factors of a successful innovation community. It also displays the determinants of an attractive environment for users to share ideas.

The thesis uses content analysis. The data is from "Ideas & Feature Requests" of Clash Royale online community, a mobile game produced by Supercell. The thesis concentrates on card idea threads. Total 2198 threads are analyzed. A research model is built based on the previous research. "Enjoyment", "Feedback", and "Leadership" (with "Lead Member" and "Moderator") are the motivations in the research model.

The analysis results affirm the motivations and give more insights. The results find that "praise" and "advice" are the essential types of feedbacks. And feedbacks could increase enjoyment. The final model consists of "Enjoyment", "Feedback" (with "Praise" and "Advice"), and "Leadership" (with "Lead Member" and "Moderator"). It indicates the influence of feedback on enjoyment as well. In conclusion, enjoyment encourages players to participate innovation; feedback and leadership draw them to share the ideas.

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**Keywords** Mobile Game, Motivation, Online Community, User-Centered Innovation

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# 1 Introduction

The chapter introduces the thesis. It starts with the background of the mobile industry and online communities. Then, it elaborates the motivation of the thesis and points out the research gap. The research question is defined based on the previous research to the mobile game online communities and the academic studies. The subject of the thesis is to discover the motivations drive the players to participate the mobile game design. The thesis aims to propose a new model and encourage future research and businesses to explore the potential of players. The chapter ends with the structure of the thesis, which briefly lists the summary of each chapter.

## 1.1 Background

It was estimated that mobile games would generate 46.1 billion dollars in 2017, take 42% of the global game market, and exceed the share of PC games or game consoles. (McDonald, 2017) In the PC games and game consoles industry, hardcore games are quite popular. However, on mobile phones, the mainstream is casual games which are

*"Games that generally involve less complicated game controls and overall complexity in terms of gameplay or investment required to get through game."*  
(Wallace & Robbins, 2006)

Meanwhile, casual game players are defined as

*"Gamers who play games for enjoyment and relaxation rather than games with steep learning curves or requiring high levels of commitment or involvement."* (Wallace & Robbins, 2006)

The definition shows that the players' loyalty to a casual game is harder to retain and track. A casual game requires less investment. Players could easily start, but also leave the



games. The problem appears in the mobile game community as well. Game creators often have trouble with predicting players' behavior in the community and tackling such a huge dataset.

Generally, mobile game creators put most of the efforts into making an interesting game. They design attractive interface, addictive gameplay, and challenging missions. Apart from the game itself, some creators make use of an online space to support the enjoyment of gaming experience. They could understand players' needs, improve the games, and try to be involved in players' life through the spaces. For the players, they use the platform to search information, to make friends, and to influence the game creators.

Take the famous mobile game creators for example. King, the creator of Candy Crush, launches a website "King Care" where players seek for supports from King or other players. The interaction is relatively limited and less structured. Rovio, the creator of Angry Birds, gives the permission to an online community "AngryBirdsNest.com". The community covers walkthroughs, news, and forums. Meanwhile, Rovio assigns a moderator to join the discussions. The community is more interactive, but Rovio does not fully control the space.

Supercell, the creator of Clash Royale, manages a website for the communities for every game. Similar to AngryBirdsNest.com, the website clearly defines the object of each community and forum. One notable forum is "Ideas & Feature Requests" of Clash Royale. The members presented ideas with comprehensive descriptions, pictures, tables, and fixing logs. A leadership group was there to hold events and train newcomers. The members tried the best to maintain the quality of the idea threads, and, further, strengthened the influence on Clash Royale. The forum seemed to have an impact on Supercell so that the members of the forum were more eager and enthusiastic compared to other forums and communities.

The thesis focuses on the online community of Clash Royale. The forum "Ideas & Feature Requests" served as a platform for the community to discuss new ideas and

expectations to Clash Royale. The ideas ranged from cards and arenas to achievements and gamemodes. Some cards in Clash Royale were inspired by the posts in the forum. It was a practice of users participating in the process of game design.

## 1.2 Motivation

The online space for players is various. One popular channel is the digital distribution platforms, such as Google Play or App Store. They are the main sources to download mobile games and accessible for the platform users. They often provide the basic scoring system, like star ranking or comments. The system would influence the users who are considering to download the game. Therefore, the game creators take the opinion seriously to show their sincere attitude to the players and hard-working on the improvement. Some game creators maintain social media pages to acquire opinions. Social media are effective marketing tools. Facebook and Twitter are famous for advertising. Reddit is a discussion website good at player-to-player interaction and collecting players' opinions.

Some game creators manage or participate in a well-organized online community. The obstacle of joining an online community is higher than the previous channels. Thus, it is expertise to gather a group of passionate players. The characteristic of the community members is that they would keep the attention to the product even though they do not possess it. (Schau, Muñiz, & Arnould, 2009) The game creators could take advantage of the community to execute some tasks. One mission is reporting bugs or problems. The community members could specify more details on the platform. Another topic is walkthroughs. The walkthrough helps the community members overcome the tough levels. And it reduces the chance of losing interest in the game.

"Ideas & Feature Requests" has the potential to be an efficient approach to increase players' loyalty. The members have the same target to work for and exchange viewpoints. They would sense the belongingness and satisfy the social needs in the discussion.

Meanwhile, the forum shows the game creator expects for the stimulation from outsiders and respect the voice of players. However, the threshold to manage the forum seems higher. So it is hardly found in the communities of other famous mobile games. Thus, it might be interesting to investigate the factors boosting the activeness of "Ideas & Feature Requests".

The thesis mainly focuses on the motivations to participate the game design process, understanding why players are willing to invest time and effort in mobile games. Regarding the features of "Ideas & Feature Requests", three topics are included, the players' loyalty to mobile games, the factors of success of an online community, and the motivations to contribute to user-centered innovation.

After literature reviews, the research to the user participation of game design process is uncommon. Firstly, researchers worked on games and players' loyalty. They regarded online communities could nurture the players' loyalty. (e.g. (Ho &Huang, 2009; Hsu &Lu, 2007; Huang &Hsieh, 2011; Su, Chiang, Lee, &Chang, 2016) Huang &Hsieh (2011); Su, Chiang, Lee, &Chang (2016)) And yet, there is rare research only targeting mobile game communities and how communities affect the development of games.

Secondly, many studies investigated the online communities. Researchers explored the determinants of success of an online game community (e.g. Ho &Huang (2009), Preece (2001)), the value of a brand community for firms (e.g. Hagel III (1999), Schau et al. (2009)), and the governance and inspiration in the process of knowledge-sharing. (e.g. Faraj, Jarvenpaa, &Majchrzak (2011), Sangwan (2005)). But the results are seldom examined in a mobile game community.

Thirdly, when it comes to the innovation in a community influenced by firms, the linkage between the level of consumer involvement and the motivation was examined. (e.g. (Jeppesen (2005), Jeppesen &Frederiksen (2006)) The motivations to contribute to open innovation, especially open source software, were analyzed. (e.g. Henkel (2006), Shah

(2006)) The trend and application of crowdsourcing were studied as well. However, the involvement of outsiders in the mobile game industry is rarely explored by the researchers.

As a result, there is a research gap to analyze "Ideas & Feature Requests" and recognize the motivations. The thesis tries to present a new model established by the relative theories and the results from "Ideas & Feature Requests". The model could bridge the gap between user-centered innovation and mobile games. It also helps to deepen the understanding of the mobile game community. And, further, the result is wished to benefit online communities in other industries. The fashion of user-centered innovation is adopted by many fields. The demand of users' contribution is waiting to be solved. The thesis could provide insights on how to build an encouraging environment for users.

### 1.3 Research Question

The popularity and energy of "Ideas & Feature Requests" of Clash Royale made it unique from other forums and mobile game communities. The purpose of the forum was unusual. Well-structured and detailed posts were frequently found. Thus, the thesis aims at the causes why the community members were willing to contribute their creativity to the game. The research question is: **What are the motivations driving players to participate in mobile game innovation process with the game creator?**

The "motivation" is the subject of the thesis. The definition of "participate" refers to "post a new idea". In other words, the thesis is to discover the motivations to post a new idea. The "innovation process" in the question means "mobile game design". All kinds of ideas were posted to the forum, including new characters, new functions, and new gameplay. The thesis chooses to only analyze the card ideas, which is the majority in the forum. Plus, the motivations to engage in a community might be totally different with or without the participation of the game creator. Because the community was managed by Supercell, "with the game creator" is specified in the question.

## 1.4 Aims of the Study

The thesis aims to discuss what would encourage players to devote their creativity, time, and knowledge to game creators. A new model is proposed to present the motivations and answer the research question. First is online communities, which are ubiquitous in many fields. The size of the community could indicate the number of loyal consumers. The consumer-to-consumer interaction could compensate the weakness of marketing strategies. However, it is still difficult for firms to manage the communities, and attract more consumers. The thesis is expected to help firms establish an environment appealing to consumers, and invite them to contribute to the firm-hosted community.

Secondly, user-centered innovation is included. It mainly relies on online communities and consumers' passion and creativity. It is accomplished by the consumer-to-consumer or consumer-to-firm collaboration. Although it is widely implemented in many realms, the user-centered innovation in the mobile game industry is seldom emphasized from the business side and academic perspective. It is not clear how mobile game creators could take advantage of the fashion. The relationship between game creators and players might be different if players are more involved in the development of the game. Therefore, the thesis would discover what players look forward from the forum and what they think of the representative of the game creators.

Thirdly, the thesis suggests a method to efficiently observe the online community with qualitative research. Many researchers have investigated online communities with quantitative research, questionnaire or interviews. The observation is rarely used. The thesis expects to discover what lies between lines by the method.

Furthermore, the thesis proposes a model to demonstrate the motivations. Many theories were presented by researchers, such as self-determination theory (SDT) and uses and gratifications theory (UGT). They serve as the fundamental of the model. The model

could draft and generalize the motivations found in online communities. The model is tested by "Ideas & Feature Requests". But it still demands more tests in other online communities.

The abilities of an online community are noticed by businesses and researchers. For instance, the nature of an online community is able to mark the prior expectations by the popularity<sup>1</sup> of an idea. Nonetheless, some communities lose the function because of insufficient active members. The thesis could help to energize the community and increase the number of the active members.

## 1.5 Structure of the Thesis

The thesis starts with an introduction to the topic, containing the background, motivation, research question, and aims of the thesis. The chapter provides an overview of the mobile game industry, the current situation of online communities, and how mobile games and online communities work for each other. A glance of the case forum, "Ideas & Feature Requests" and the thesis goal are illustrated in the chapter.

The next chapter is Literature Review. It presents the existed studies for mobile games, online communities, and user-centered innovation. The motivation theories and the studies investigating motivations to participate online communities and user-centered innovation are included. The chapter is the foundation for the methodology and empirical research section. It helps to build a research model and method to explore the community members' interactions in "Ideas & Feature Requests".

The third chapter is Methodology, where develop the research model and the method. According to the previous research, the elements of the research model are "Enjoyment", "Feedback", and "Leadership". The research method is related to collecting

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<sup>1</sup> The popularity is often measured by how many people join the discussion or how often the idea is recommended.

and addressing data. The data is downloaded from "Ideas & Feature Requests". After a series of steps to filter data, the thesis selects the threads for analysis depending on the results of coding.

Following Methodology, Result presents the analysis of the online forum. Tables and figures are used to support the analysis. The former ones list the quotations from the forum to prove the elements in the research model. The latter ones display the network about how the quotations are linked. The results are organized based on the research model. Enjoyment, feedback, and leadership are affirmed as the motivations to answer the research question.

Next, Discussion develops the answer to the research question according to the results in the previous chapter. However, the results show that the research model is not fully suitable for the case forum. Thus, the model is modified to better summarize the motivations to participate the mobile game design process. Following the answer, the chapter reviews the results with the previous research. The forum could support the success of the online community. But it is not accurate to regard the forum as a practice of user-centered innovation. Apart from the results, there are some findings not completely relative to the motivations or research model. But they worth noticing. The chapter tackles the additional findings at the end.

The chapter suggests the implications of the thesis and the approaches for future research. Concerning theoretical implications, the thesis introduces a new model and a method. Regarding practical implications, it gives some advice to manage an online community. Lastly, the chapter ends with the limitations and the direction for the future research.

The final chapter of the thesis is Conclusion. It presents a summary following the thesis structure. The summary highlights the thesis features.

## 2 Literature Review

The chapter discusses the studies possible to answer the research question: **What are the motivations driving players to participate in mobile game innovation process with the game creator?** The question contains the issues related to mobile games, online communities, innovation process, and motivations. The chapter reviews the studies and serves as the foundation of the methodology section.

### 2.1 Factors of Success of Mobile Games

The success of a mobile game is often defined by many factors, such as the number of players or the novel techniques. Among the factors, players' loyalty is verified as one of the most critical determinants. (Su et al., 2016) Therefore, mobile game firms are suggested to put more efforts on maintenance of the loyalty.

Players are stimulated by various strategies in order to draw their attention and keep the interests. From the viewpoint of "human-computer interactions", it focuses on catching players' eyes and increasing the gaming enjoyment, such as delicate interface design, sound effects, and ease of use. (Merikivi, Nguyen, & Tuunainen, 2016; Park & Kim, 2013; Su et al., 2016) Then, the game difficulties should keep one step ahead of the players' skills. The increasing challenges train the players' skills and secure the enjoyment. (Park & Kim, 2013; Su et al., 2016) Unsuitable difficulties would drive players away because of boredom or lack of sense of achievement.

Regarding "social interactions", how players get in touch with each other would influence the game experience, increasing variety in gameplay, and creating belongingness. (Su et al., 2016) The interactions could be inside games, for example, forming a team, having a battle, and group chatting. The ones outside games are also noted, like online communities.



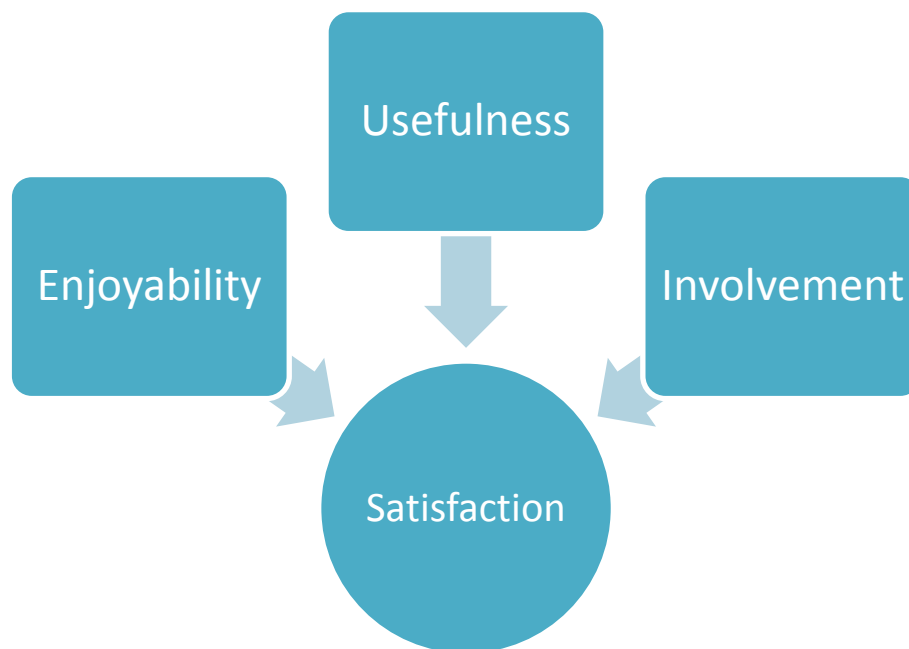
Another determinant of the business success of a mobile game is "marketing". People tend to choose the familiar game. (Bowman, Jöckel, & Dogruel, 2015; Park & Kim, 2013) According to the experiment by Bowman et al. (2015), people would select a game based on how frequently they spot the game on social media. Thus, brand awareness and the market environment become essential. When people are more acquainted with a logo or brand, they are more likely to give the game a try. Furthermore, mobile game creators should detect the trend of the industry. They are suggested to investigate popular graphic styles, themes, and gameplay. The actions would ensure the market fit of a new game. (Hallikainen, Tuunainen, & Vihinen, 2010; Park & Kim, 2013)

To analyze the success of a mobile game, three dimensions should be considered, "human-computer interactions", "social interactions", and "marketing". The first one emphasizes the game design. The second one takes care of the players. And the last one addresses the market environment. They cover the factors inside and outside the game itself.

## **2.2 Online Community**

With the growth of the Internet and its applications, online communities have become the channel to satisfy social interactions among the people who share the same interests. Through discussions, the community members could obtain knowledge or show the passions. Researchers affirmed that online communities have a positive impact on business value and users' loyalty. (Schau et al., 2009) Since online communities are able to gather first-hand information from customers, firms could get in touch with the customers directly. The connection could help to define precise strategies for the customers. (Hagel III & Armstrong, 1997) Online communities give firms a chance to learn from the customers and, then, sharpen the product. (Hagel III, 1999)

To understand the success of an online community, one approach is to examine the members' satisfaction. According to the study by Ho &Huang (2009), the "satisfaction" is the reason to participate an online community and to keep the loyalty. Figure 1 demonstrates the factors increasing the satisfaction. Enjoyability is the most significant. It affects the willingness to start and continue joining the community. The second one is usefulness. It judges the fulfillment that a community is able to provide for the members' needs. The third one is involvement. It is related to belongingness and the community culture. (Ho &Huang, 2009)



*Figure 1. Factors Affecting Satisfaction to an Online Community (Ho &Huang, 2009)*

Another way to measure the success of online communities is to analyze its usability and sociability. The indicators are designed by Preece (2001). Sociability is about the content and manners of social interactions. It could be examined by 3 dimensions: purpose, people, and policies. Figure 2 depicts the structure of sociability. Higher sociability could form a lively atmosphere and assemble a huge amount of enthusiastic people sharing similar hobbies. (Hsu &Lu, 2007; Preece, 2001)

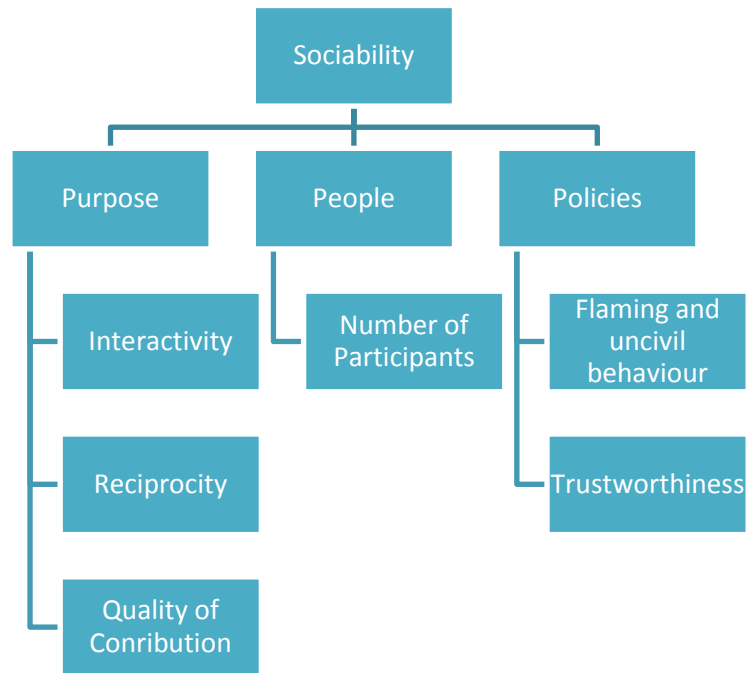


Figure 2. Framework of Sociability (Preece, 2001)

Usability is related to the ease of participating and using a community. Preece (2001) proposed 4 determinants: interaction support, information design, navigation, and access. The determinants are evaluated by 5 dimensions. Every dimension has a question for the determinants, as listed in Table 1. Higher usability could avoid the community members distracting from the motivation to participate the community. (Hsu & Lu, 2007; Preece, 2001)

Table 1: Indicators of Usability (Preece, 2001)

Determinant	Dimension	Question
<b>Interaction support</b>	<b>Speed of learning</b>	How long does it take to learn about dialogue and social support?
	<b>Productivity</b>	How long does it actually take to send or read a message, or perform some other action, etc.?
	<b>User Satisfaction</b>	Are users satisfied?
	<b>Retention</b>	How much do users remember about the dialogue and social support?
	<b>Errors</b>	How many errors do they make?
<b>Information design</b>	<b>Speed of learning</b>	How long does it take to learn to find information (e.g. help)?
	<b>Productivity</b>	How long does it take to achieve a particular information-oriented goal?
	<b>User Satisfaction</b>	How satisfied are users?
	<b>Retention</b>	How much do users remember after using the system?
	<b>Errors</b>	Can users access the information they need without errors?
<b>Navigation</b>	<b>Speed of learning</b>	How long does it take to learn to navigate through the communication software and website or to find something?
	<b>Productivity</b>	Can users get where they want to go in a reasonable time?
	<b>User Satisfaction</b>	How satisfied are they?
	<b>Retention</b>	How much do users remember about navigation?
	<b>Errors</b>	How many and what kind of errors do they make?
<b>Access</b>	<b>Speed of learning</b>	Can users get access to all the software components that they need?
	<b>Productivity</b>	Can they download them and run them in a reasonable time?
	<b>User Satisfaction</b>	Are response times reasonable?
	<b>Retention</b>	Not specifically relevant
	<b>Errors</b>	What problems do they encounter when trying to download and run software?

Two theories evaluate the success of an online community. The first theory is to see its users' satisfaction. Enjoyability is the initial motivation and the reason to continue joining a community. Usefulness is related to meeting the users' needs and expectations. Involvement represents the mental and social satisfactions nurtured by participating the community. The second theory is to investigate the sociability and usability. The former one leads the direction of social interactions; the latter one supports the interactions. The theories cover the perspectives of the community members and the management.

### **2.3 User-Centered Innovation**

The traditional innovation process often requires professions, techniques, and resources. Ordinary users could not easily join the process. However, through the internet and media, users are capable of the knowledge. The phenomenon pushes firms to value the voice of the public and to open the innovation process. (Chesbrough, 2003; vonHippel, 2005) User-centered innovation is a modern concept absorbing inventive solutions from outsiders. (Brabham, 2013) Compared to developers inside firms, outsiders are less limited by regulations and past experience. Adopting user-centered innovation has more possibility to acquire revolutionary solutions.

Online communities are essential space to foster user-centered innovation. They gather a bunch of loyal and passionate users for a product, a brand, or an issue. It is the start point of the innovation process when the community members exchange information and opinions. Firms acquire the innovation from the discussions and implement it into products or services. Depending on the types of user-centered innovation, the levels of users' involvement are different.

According to vonHippel (2005), what makes user-centered innovation so valuable is that they are "directly" benefited from the innovation. That is, the result is exactly what they want. Furthermore, there are lead users in an online community who actively

participate and involve in the community. They often possess a high reputation and power to decide the direction of the community. For firms, the lead users have the distinct value that their voice is greatly possible to be "commercialized". (vonHippel, 2005)

### 2.3.1 User Innovation

The concept of user innovation originates from the solution of handling sticky information. (vonHippel, 1994) It is quite costly from the step of collecting data to forming a product inception. To decrease the cost and increase efficiency, firms tend to leave the information from consumers to be addressed by consumers. (vonHippel, 2005)

The first example is user toolkits. It is a package released by the firm and users use it to modify the product to solve their problems. (Jeppesen, 2005) Then, the modified product is shared in online communities. It allows the community members to apply. It could be considered as both a reflection of and a response to users' needs. (Jeppesen, 2005) The popularity of the modified product unveils the hidden demand and secures the acceptance of the market. Sometime, firms would include the popular modified product into the product line.

User innovation and the online community not only collect data, but also support marketing survey, consumer support, and product development. (Arakji &Lang, 2007; Jeppesen, 2005; Jeppesen &Frederiksen, 2006) However, firms should not take the information from the community without any cost. From the research by Jeppesen (2005), the cost saved by toolkits might have to be distributed to support the toolkits. Also, the release of toolkits means the firm should uncover some sections of product development. Therefore, the studies also suggested firms think seriously about the "openness" for user innovation. (Arakji &Lang, 2007; Jeppesen, 2005)

### 2.3.2 Open Innovation

A firm implementing open innovation seeks a way to reveal its idea to the market and attract other actors (e.g. developers and sponsors from inside or outside the firm) to improve it. (Chesbrough, 2003) Unlike user innovation, participants of open innovation are often equipped with professional skills or tools. (Krogh, Haeffliger, Spaeth, & Wallin, 2012) The model is widely used in software development projects, known as Open Source Software (OSS), whose definition is

*"Software that can be freely accessed, used, changed, and shared (in modified or unmodified form) by anyone." (Open Source Initiative, n.d.)*

The collaboration of an OSS project is generally community-based. The community is more flexibility and loose. (Hertel, Niedner, & Hermann, 2003) Instead of a powerful leader, it relies on the culture of "doing the things right" and "achieving the complement" to maintain the quality of the open software. (Krogh et al., 2012)

Users and developers are the assets of an OSS project. (Raymond, 2001) When a project possesses a large number of participants, bugs are able to be found and fixed expeditiously. Thus, attracting new participants and keep the loyalty are decisive. It corresponds to the assertion by Raymond (2001) that

*"If you treat your beta-testers as if they're your most valuable resource, they will respond by becoming your most valuable resource."*

### 2.3.3 Crowdsourcing

The key point of crowdsourcing is outsourcing tasks (e.g. problem-solving) to a crowd of people. Those people are often enthusiastic in and inspired by the issues and tasks. (Blohm, Leimeister, & Krcmar, 2013; Brabham, 2008) Crowdsourcing believes that the power of "crowd" could handle complicated problems.

Compared to other user-centered innovation, the biggest advantage of crowdsourcing is the capability of being implemented in a wide range of topics. The tasks could be touchable goods or intangible concepts. (Brabham, 2013) According to a "four-type typology" brought up by Brabham (2013), crowdsourcing has been used for collecting information, solving empirical problems, gathering novel ideas followed by market support, and conducting large-scale analyses.

However, crowdsourcing tasks have the limitations. They should be precise and able to be divided into pieces. The segment of the task asks for less investment (e.g. knowledge or time) from participants. (Blohm et al., 2013; Kittur, 2010) Also, tasks are suggested to allow independent works because the ties between participants are weak. (Kittur, 2010; Stewart, Huerta, & Sader, 2009)

The main actors in the three types of user-centered innovation are users. They are not only the vital sources of innovation, but also the necessary force to polish the innovation. Generally, user innovation and crowdsourcing are more hosted by a business. The business has the most right to control the innovation process. Notwithstanding, open innovation tends to open the process to the public, and every user has the power to influence the future of the project. Firms could decide which innovation process is practicable by the level of users' involvement.

## 2.4 Motivation

The word "motivation" is defined with "enthusiasm"<sup>2</sup>. (Cambridge English Dictionary, n.d.) To fulfill the life, people are eager to learn and to use what they learn. (Ryan & Deci, 2000) The motivation pushes people to pursue a goal and to achieve the "better life" or the "better self". It could be extrinsic, such as physical rewards or punishment, or intrinsic, like satisfaction or enjoyment.

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<sup>2</sup> The definition of "motivation" in Cambridge English Dictionary is "enthusiasm for doing something".



### 2.4.1 Motivation Theories

Three motivation theories are elaborated in the section, Self-Determined Theory (SDT), VIST model, and Uses and Gratifications Theory (UGT). The first theory, Self-Determined Theory (SDT), argues that motivations stem from the desires to feel "competence, autonomy, and relatedness" and, further, to develop the self. (Ryan &Deci, 2017; Ryan, Kuhl, &Deci, 1997) To cover and examine as many issues as possible, researchers developed sub-theories under the structure of SDT. The first two theories are Cognitive Evaluation Theory (CET) and Organismic Integration Theory (OIT).

As the first sub-theory of SDT, cognitive evaluation theory (CET) concentrated more on intrinsic motivations. (Ryan &Deci, 2017) Intrinsic motivations drive people to have the behavior, but probably have difficulty to maintain the behavior. Thus, CET could help to fill the gap. It involves social and environmental considerations into the theory. (Ryan &Deci, 2000) The second sub-theory is organismic integration theory (OIT). It helps to explain the situation that intrinsic motivations have less effect on. (Ryan &Deci, 2017) Extrinsic motivations (Figure 3) are its main differences from CET.

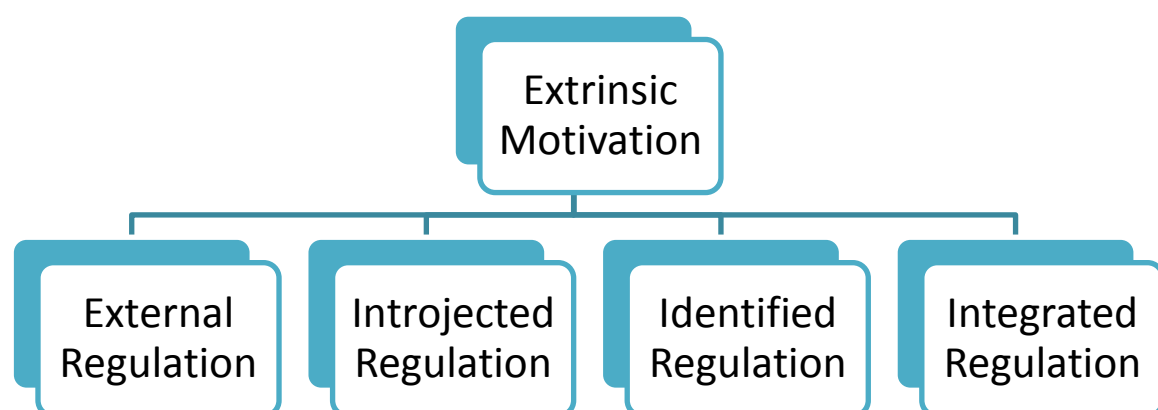


Figure 3. Types of Regulations Related to Extrinsic Motivation (Ryan &Deci, 2000)

Another motivation theory is VIST model. (Figure 4) The model is evolved from the motivations to participate in social movements. VIST is composed of 4 words, valence, instrumentality, self-efficacy, and trust. Valence is the value of the team goals weighed by an individual. Instrumentality is the self-importance to the team results judged by the individual. Self-efficacy is the perceived possibility that the high efforts lead to high performance. Trust contains trust in other members and the social mechanism and trust in the technologic support. (Hertel, Konradt, &Orlikowski, 2004; Hertel et al., 2003)

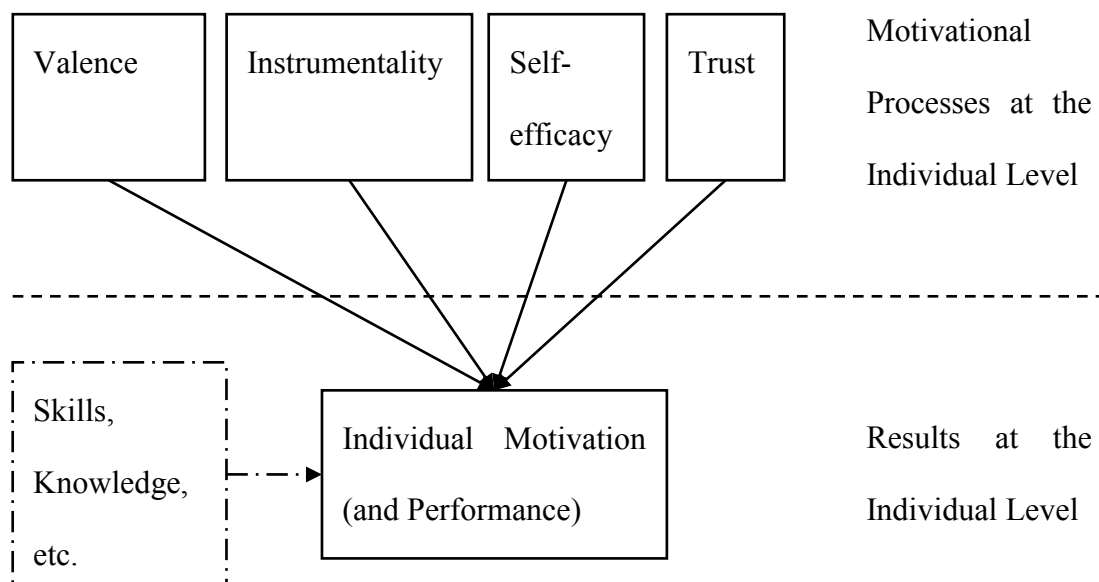


Figure 4. VIST Model (Hertel et al., 2004)

Different from above theories, Uses and Gratifications Theory (UGT) discusses the gratification needs. As presented in Table 2, the needs are categories as 5 groups, cognitive needs, affective needs, personal integrative needs, social integrative needs, and escape or tension-release needs. (Katz, Haas, &Gurevitch, 1973; Sangwan, 2005) The former 4 needs are to strengthen the connections with the referents. The integrative needs assemble the cognitive and affective factors. The last one category, escape or tension-release needs, is to weaken the contact with the unpleasant part of self, social role, or referent groups. (Katz et

al., 1973) The needs would motivate people to choose preferred mass media or join social media. In other words, they could be applied to predict users' preference and tendency to use the media. (Katz et al., 1973; Raacke & Bonds-Raacke, 2008; Wang, Jackson, Wang, & Gaskin, 2015)

*Table 2: Media-related Needs (Katz et al., 1973; Sangwan, 2005)*

Category	Mode	Connection	Referent
<b>Cognitive needs</b>	To strengthen	Information Knowledge Understanding	
<b>Affective needs</b>	To strengthen	Gratification Emotional experience	
<b>Personal integrative needs</b>	To strengthen	Credibility Confidence Stability Status	
<b>Social integrative needs</b>	To strengthen	Contact	Family Friends World
<b>Escape or tension-release needs</b>	To weaken	Contact	Self Negative reference groups

The motivation theories have their specialties on illustrating motivations. SDT is widely used in many fields. It is used in the studies for online communities and user-centered innovation. VIST model is good at virtual teams and concentrates more on the mechanism of the "self". UGT takes needs as the motivations, that is, the purpose to make a decision is to satisfy the needs. It is implemented in the research about media.

### 2.4.2 Motivations in Online Communities and User-Centered Innovation

Researchers brought out more explicit motivations to contribute to an online community or user-centered innovations. "Enjoyment" is widely recognized as the lead role among motivations. People would not participate a community if they could not find the enjoyment to be a community member. (Ho &Huang, 2009; Hsu &Lu, 2007)

In the context of user-centered innovation, hobby-driven users are inclined to contribute simply for enjoyment. (Hertel et al., 2003; Jeppesen &Frederiksen, 2006; Shah, 2006) They take the process of problem-solving as an interesting work. (Raymond, 2001) The interests prompt them to track a project, and their ability is nurtured to deal with difficult tasks which require a well understanding of the project. (Shah, 2006) No matter online communities or user-centered innovation, enjoyment is the necessary attraction and force secure the sustainability of a project or a community.

"Need" is another notable motivation. In online communities, the need often refers to exchanging information and social interactions. They are determinants of the success of an online community. (Ho &Huang, 2009; Hsu &Lu, 2007; Preece, 2001) They influence the members' satisfaction and loyalty, which are seen as the incentives to contribute. For example, the members joining a knowledge-sharing community would value the support to achieve the purpose more than social interactions. (Sangwan, 2005)

For user-centered innovation, the needs are diverse. It could be a concrete problem. The solution to the problem could not be provided by the existing tools. Or the users wish the solution could be used in the future. Then, the need-driven participants often have no choice but to participate the innovation process. (Hertel et al., 2003; Shah, 2006) For some users, they need an opportunity to improve their ideas and skills. The exchange of opinions becomes a necessity for an user-center innovation platform to survive. (Blohm et al., 2013; vonHippel, 2005) In addition, Hertel et al. (2003) pointed out a need for identity. When an

OSS project is famous enough, new participants join it for the recognition as a member of the project.

Other motivations, such as tangible rewards are another important attraction to users. Especially for crowdsourcing, studies usually suggested executing a recognizable reward plays an important role in incentive model. (Brabham, 2008; Kittur, 2010; Soliman & Tuunainen, 2015; Stewart et al., 2009) "Challenge" would stimulate the community members to increase contributions. (Beenen et al., 2004) "Curiosity" is an initial motivation to join crowdsourcing. (Soliman & Tuunainen, 2015)

To discuss the motivations under the background of "Ideas & Feature Requests", the popularity of Clash Royale builds the foundation for the forum. Players join and contribute to the community owing to the love for the game. Therefore, the enjoyment is an important element in the thesis. Besides, the purpose of the forum is similar to user-centered innovation. It calls for new inspirations from the players, and encourage players to support creating new ideas. Theories for online communities and user-centered innovation should be combined. SDT and UGT could better serve as the root to develop the research model.

However, VIST model is not suitable to describe the forum. VIST model is especially good at the analysis for virtual teams. The bonds among the members in the forum are too vulnerable to be considered as a team. Additionally, the forum has no clear reward policy and the ability to attach any identity inside Clash Royale. Therefore, they are not stressed in the thesis.

### 3 Research Methodology

The chapter builds a research model based on the previous research. The research model is to structure and demonstrate the answer to the research question. Another part of the chapter is data preparation. The source of data and the tools to filter out the analyzable dataset are displayed. The last is the procedures of the qualitative analysis executed in the thesis. The method is designed with the references to the previous research and the qualitative research software.

#### 3.1 Research Model

To define a research model, the thesis combines the motivations to contribute an online community and the ones to participate user-centered innovation. According to Literature Review, there are several motivations, such as enjoyment, needs, and rewards. Considering the characteristics of "Ideas & Feature Requests", some motivations mentioned are not applicable.

The first motivation used in the thesis is enjoyment. It is found in the articles related to both online communities and user-centered innovation. Researchers regarded enjoyment as the most important motivation to participate, to continue, and to maintain the quality of information the culture of the online community. (Hertel et al., 2003; Ho &Huang, 2009; Hsu &Lu, 2007; Krogh et al., 2012; Raymond, 2001)

Secondly, feedback is the main method for community members to interact. It delivers information, feelings, and discussions. The desire to have feedbacks is related to the concept of "free revealing". (vonHippel, 2005) Free revealing describes the condition that community members post ideas freely, and other members post their opinions freely as well. The gains would stimulate the participants to keep working on innovation in order to get "more" improvements. Thus, the more active the community is, the more feedbacks the

members could expect to receive. The word "feedback" is used instead of "advice" in order to include diverse types of interactions. It is uncertain in the previous research that other than advice, what kinds of responses are welcomed by the community members. Therefore, the thesis uses a generic word and wish to explicit the details in the sections of results and discussions.

The third motivation is leadership. Leadership has two aspects. One is the moderators who have the power to manage the community. In the communities hosted by firms or organizations, they are the official representatives. The community members see them as the people who deliver the opinions. Ho &Huang (2009) claimed the leadership has the positive correlation with the satisfaction of the community members. The moderators could be a strong encouragement to the community members.

The other one is lead members who are active and possess many high-quality posts. The lead members grow from the ordinary users who have great passions. The enthusiasm drives them being active in the community. The activeness brings them the reputations and affirmation from the community members. Therefore, lead members are the strong pillar maintaining the culture and atmosphere in a community or an user-centered innovation project. (Jeppesen &Frederiksen, 2006; Shah, 2006) The lead members not only guide the community to the way that members expect, but also compensate the weaknesses of firms.

As mentioned above, the research model is drafted as Figure 5. Enjoyment, feedback, and leadership are the motivations to participate user-centered innovation. The community members are prompted by enjoyment to participate the innovation. They call for replies to improve their ideas. Or they are attracted by the leadership so that they join the innovation process.

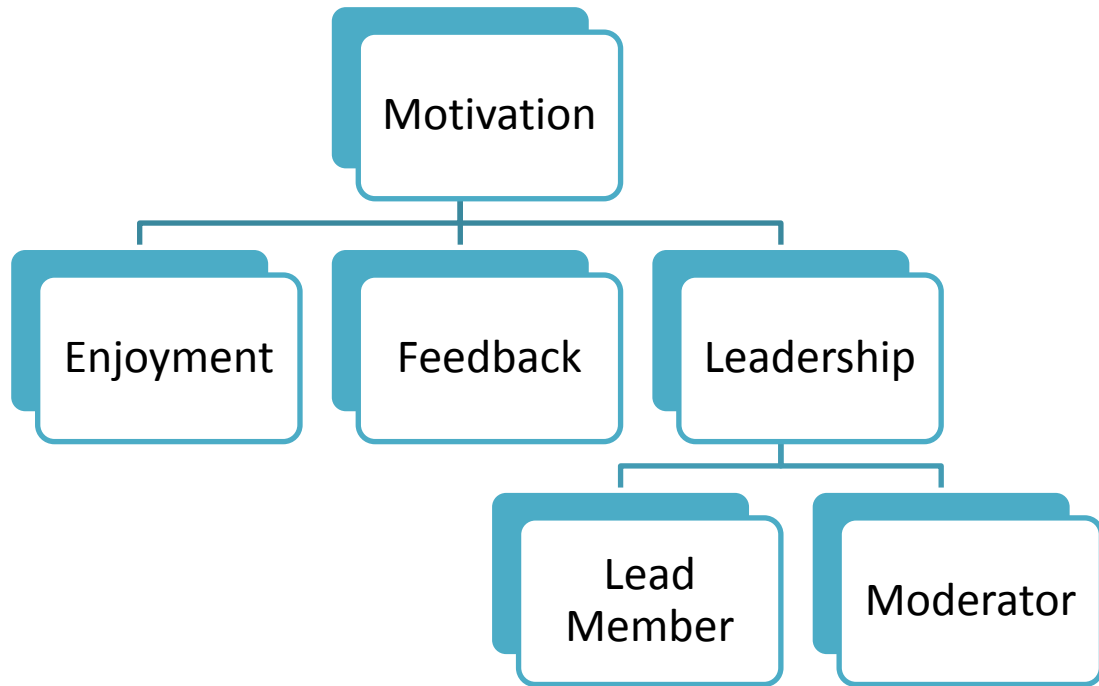


Figure 5. Research Model of Motivations to Participate User-Centered Innovation

### 3.2 Data Preparation

Data is from the online forum "Ideas & Feature Requests" of the mobile game Clash Royale produced by Supercell. The forum started in March 2016. There were totally 1678 pages with 34547 threads. Its intent was to collect ideas from the members of the online community hosted by Supercell. The major ideas were card<sup>3</sup> ideas. The others were arenas<sup>4</sup>, rewards, and feature ideas. Besides, not all of the threads presented ideas. Some threads provided supports for images and lore, and some were for card idea competitions. Owing to the total amount of threads, the thesis only analyzes card idea threads.

The data is managed by MySQL. The analyzable threads are selected by the following series of steps. The sticky posts are excluded first because they are less interactive. Since English is the only official language in the forum, only the posts written

<sup>3</sup> Cards represent playable troops and serve as the only method to deploy them.

<sup>4</sup> "Arenas are the battlefields where players compete." ("What are the Arenas? | Supercell Support," n.d.)



in English are included. Then, the threads with less than five replies are excluded. Five replies are the minimum to discover insights from the interactions.

The next is to exclude the threads unreasonably bumped up by the idea creators. The behavior, "bump up", was not allowed in the forum. It has the problem for the thesis that the number of replies does not match the popularity. The definition of "unreasonably bumped up" is that the replies by the idea creators take over 60% (included) of total replies. The final step is to pick out card ideas. The thread titles containing "new", "card", or "idea" would be left. But the titles having the words about other features in Clash Royale are excluded, such as, "arena", "chests", and "gamemode". In the end, 2198 threads are left for analysis.

Among the threads, three threads are highlighted. "New card idea: Dragon Lancer" was the thread having the most number of replies. It successfully attracted many members to leave comments. The thread was the symbol of the most popular idea. "New Card Idea: Meet The Outlaw" was the thread having a reply by a moderator from Supercell. The Supercell moderators were the figure of the "official" leadership. The thread could show how the leadership encourages the community members. And the other thread is "~NEW Spell~ Skeleton Spell". The community members found that the idea was implemented in Clash Royale although there is no official announcement. Because "ideas being implemented" was the main target for the members, the thread represented the achievement of the community.

All the threads are imported to Atlas.ti. The software is for qualitative research. It could generate word clouds, search keywords, and draft interaction networks. The functions support the thesis to analyze the threads.

### 3.3 Analysis Method

The study examines the threads with content analysis. It is the method to abstract a large volume of data into systematic categories or models. (Stemler, 2001) It is suitable to observe members' interactions patterns in the data. Content analysis has two approaches, deductive and inductive. The former one fits the research that has existing models or theories, while the latter one is often adopted for the study lack of theories. (Elo & Kyngäs, 2008) The thesis basically follows the deductive approach.

The purpose of the thesis is to see the motivations to contribute. One thread often represented one idea. It could be seen as a contribution. Thus, the coding unit is a thread. In Figure 6, there are totally 9 units. Figure 7 is an example coding unit. A thread contains an original post and multiple replies. The replies might be admiration, advice, or requests. Different kinds of replies cause different interactions. Then, they form networks.

 <b>Disable Taunt Option</b> Started by MiniMustache, March 9th, 2016 1 2 3 ... 74	Replies: 733 Views: 32,197	Sneakymaori June 8th, 2016
 <b>Featured Ideas [Community Supported Thread]</b> Started by LigiMeon7, March 6th, 2017 1 2 3 ... 54	Replies: 533 Views: 37,745	Murat79 August 24th, 2017
 <b>Card Image Creations - Order Thread</b> Started by MrPancakeGuy, May 16th, 2017 1 2 3 ... 47	Replies: 461 Views: 12,547	MrPancakeGuy 3 Weeks Ago
 <b>Poll: Leaving 2v2 matches should be bannable...?</b> Started by Chubasco, June 12th, 2017 1 2 3 ... 44	Replies: 433 Views: 17,257	MasterCal September 11th, 2017
 <b>Poll: New card idea: Dragon Lancer</b> Started by Archmage101, February 1st, 2017 1 2 3 ... 40	Replies: 394 Views: 15,726	Archmage101 August 23rd, 2017
 <b>Poll: Card Idea - Flame Sorceress</b> Started by NightmareX, May 14th, 2016 1 2 3 ... 39	Replies: 386 Views: 28,558	Xpler497 December 7th, 2016
 <b>New card idea: Ninja</b> Started by Zygarde123, January 18th, 2017 1 2 3 ... 37	Replies: 365 Views: 12,047	Ajax May 30th, 2017
 <b>Let's Clean Up This Forum [Look at this mess above and below!]</b> Started by adeick8, April 2nd, 2017 1 2 3 ... 36	Replies: 355 Views: 8,437	OperationGaming 1 Week Ago
 <b>Card Ideas Tournament - By Ideas &amp; Feature Request Leader's Group</b> Started by Zygarde123, March 1st, 2017 1 2 3 ... 32	Replies: 313 Views: 5,772	Zygarde123 March 18th, 2017

Figure 6. Threads in the Forum "Ideas & Feature Requests"

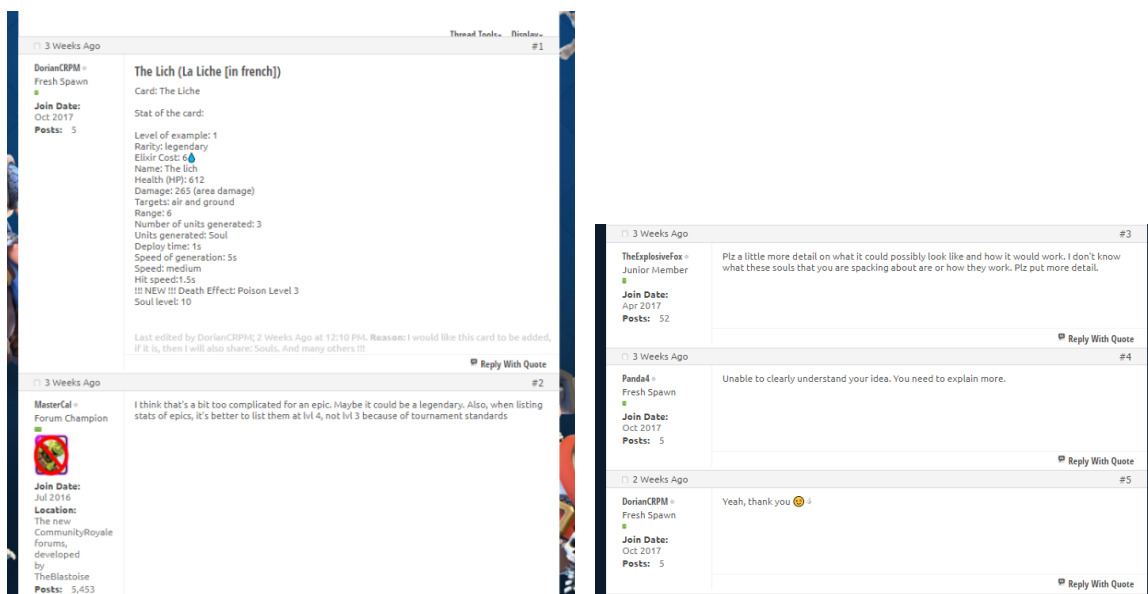


Figure 7. Example Thread

To find the interaction related to motivations or encouragement, keywords would help to handle thousands of threads. 5 keywords are defined based on the word cloud (Figure 8) generated by the highlighted threads. The top 5 frequent words describing emotions or characteristics are selected as the keywords. They are "LIKE", "GOOD", "GREAT", "WELL", and "THANK". The keywords are used to conduct coding and analyze the data. The first round coding is to mark the posts containing the keywords.

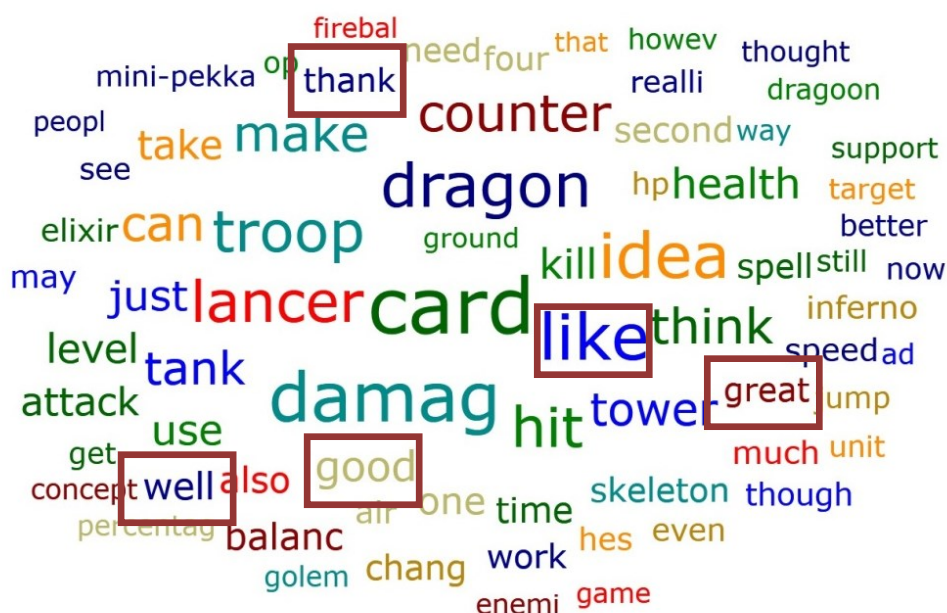


Figure 8. Word Cloud Generated by Atlas.ti Based on the highlighted Threads

However, the number of the first-round codes are too many to analyze. The second round coding is executed. It is to record the posts having "encourage", "motivate", or relative words. Then, the second-round codes are examined to find any linkage with the first-round codes. The posts would be linked to draft a network. After the second-round coding, only 2 codes have the relations. Thus, first-round codes are read randomly for the analysis.

The analysis of the highlighted threads focuses on the replies by the idea creators. The idea creators were the host of their ideas. They had the responsibility to keep the manners in the threads. And they tended to elaborate what was preferred and disliked in the threads. Therefore, the replies by them implied what motivated the idea creators to develop the current ideas and what encourage the other members to create their own ones.

The most important reason to dig into the threads is to discover the patterns and elements outside the research model. There are studies about online communities, game industries, and user-centered innovations. But there is no model to better answer the research question and describe the happenings in the forum. To prevent missing important information, the highlighted threads are analyzed respectively.

## 4 Results

The chapter presents the results of the analysis. After 2 rounds of coding, thousands of posts are marked. The results are grouped by the research model (Figure 5). The section shows how the posts represent or reveal the motivations to contribute to the innovation process.

### 4.1 Enjoyment

Enjoyment could be implied by the way of composing sentences or posts. "Word" is not able to show emotions vividly. People like to use emoticons to stress the emotions. (Derks, Bos, & von Grumbkow, 2008) In order to express "happy", the members liked to add a smiling face at the end of a sentence, like ":)" and "😊".

Table 3: Compliments with Emoticons

Username	Post
Fironic	Yeah, Great Idea. I have much better improvements for this idea :)
Jibreellopez	Good job :)
michaelgentry271	i like the idea for the sake of a like if nothing else. :")
NightmareX	I particularly like the way you created a short story to show the lore of the card. ... Nice work here. 😊
LigiMeon7	Pretty good concept! 😊

Table 4: Thanks with Emoticons

Username	Post
Rainbow131	Thanks for your comments. I really like the idea and want it in game, too 😊
KingOzymandias	Thank you for replying, I don't get many responses to my ideas :)
izenous	Thanks for reading. :)
Sammydict	Thank you! Also, the way you put across your point is good too. 😊
ButtMcCheeks	Thanks you for saying that i will think about it 😊

Table 3 and Table 4 list the sentences in "Ideas & Feature Requests" attached with emoticons, a smiling face. In the forum, emoticons frequently appeared after compliments or thanks. When a smiling face was at the end of a praise, it highlighted the enjoyment of reading the idea or the thread. When it attached to "thanks", it enhanced the strength of the gratitude.

Another presentation of enjoyment is humor. The humor often hides between lines and has multiple functions. Humor helps people better understand complicated concepts. It also showcases one's identity. (Baym, 2006)

*Table 5: Replies with Humor*

Username	Post
yolo2546	No... stay away from me...wh what's that in your hand? A hose...what are you going to do with... Gurgle... Gasp...gurgle Spooky
Zygarde123	Then I can also make him a member of illuminati. $4 = 1 + 1 + 1 + 1$ $= 2 + 1 + 1$ $= 2 + 1 + 1 + 0$ $= 3 + 1 + 0$ $= \text{Three Sides to a triangle} + 1 + 0$ $= \text{Three Sides to a triangle} + \text{One side of a line} + \text{Zero}$ $= \text{Triangle} + \text{Line}$ $= \text{Illuminati}$
ColorwarZx	so hes an offense card... but he does no damage... so hes a defensive card... but he has no health. im just kidding, good idea!
Cutioner	Holy Chicken Nuggets and Gravy! I don't know about you guys, but I really like this idea!!!

Table 5 contains different ways of humor. yolo2546 described a hilarious scenario facing the rainmaker. Zygarde123 tried to make some fun on the lore by linking "4" with a

mysterious organization. ColorwarZx used humor to packaged the concern and emphasized the admiration. Cutioner's comment seemed nonsense, but the members resonated with the comments and responded with some laughs.

Even though the post seems to be in a negative mood, emoticons or humor could ease the tension and, even, reverse the air. In the thread "~NEW Spell~ Skeleton Spell", UltraLegoGamer tried telling ButtMcCheeks he/she had a similar idea. ButtMcCheeks clarified the originality of the skeleton spell after checking UltraLegoGamer's idea.

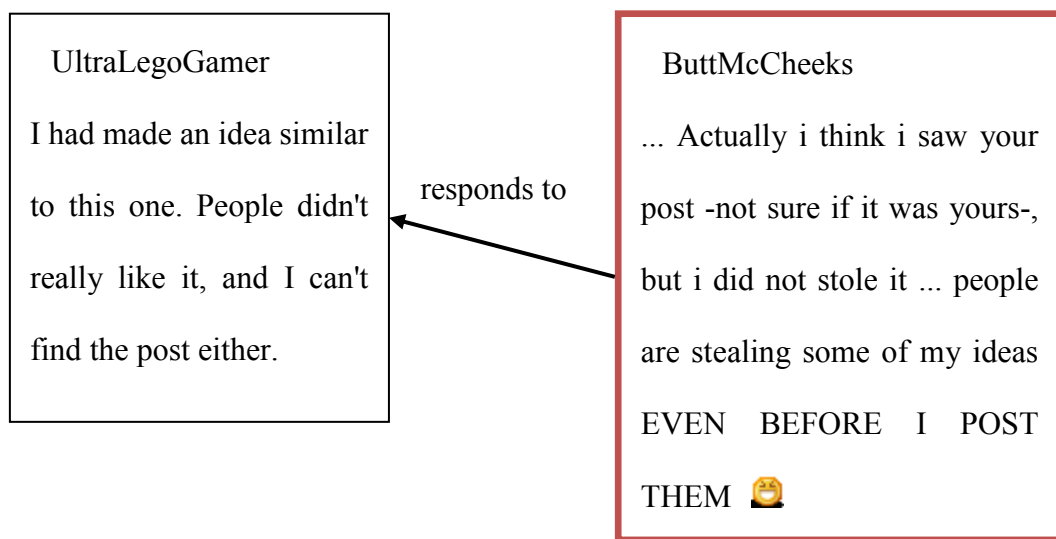


Figure 9. Interaction between UltraLegoGamer and ButtMcCheeks

Figure 9 shows the interaction between UltraLegoGamer and ButtMcCheeks<sup>5</sup>. The response by ButtMcCheeks is noticeable. ButtMcCheeks used a negative word "stealing" and put a laughing face at the end. The sentence looked humorous with the emoticon. The expression implied the appreciation to find someone who had the consensus to the future of Clash Royale.

Emoticons and humorous posts were popular in the forum. The community members usually adhered them to praises and thanks. The main function was to enhance the

<sup>5</sup> ButtMcCheeks' response is in the dark red box. In the thesis, the responses by the idea creators would be put in the dark red boxes.

emotions and appreciation. They were also able to avoid conflicts. Their popularity showed that the community members took participating in the community as enjoyment.

## 4.2 Feedback

According to previous research, feedbacks are what people call for from an online community or a user-centered innovation project. In "Ideas & Feature Requests", the most common types of feedback were "praise" and "advice". They were usually responded by appreciations. The community members left the feedbacks to the ideas they liked. They also believed the more feedbacks a thread got, the more possibly the idea would be considered by Supercell.

### 4.2.1 Praise

In the forum, the members would leave a praise to the idea when they liked it or wished to see it in Clash Royale. According to Table 6, the praise posts were sometimes easy (e.g. licorne, Evanp32, and Simooooooooonnnn), or stated why they liked and supported the idea (e.g. MrPumba and Rainbow131).

Table 6: Replies with Praises

Username	Post
licorne	Really good idea, it's an original troupe
Evanp32	Very impressed by this troop, i really hope supercell will notice! Goodluck!
Simooooooooonnnn	Seems very good. Good luck 🍀
MrPumba	Good Idea! Some ppl have been saying that 7% buff is too OP, but I think it should have higher than average damage when it has very low health, so it's not like a knight with lower damage at the beginning. I also like this Idea because you can't just put it behind a tank, meaning you might have to play more strategically. ...



Username	Post
Rainbow131	Great, Amazing I really really like this troop. You've done a very great job, very good stats! ... It's new, has some really nice moves and fits with the game ...

Praises often have the positive effect. They encourage the members to keep developing ideas. In the thread "{New Card Idea}: ERUPTOR" by LordVankous, HerculesRoyale left a praise to the idea. LordVankous responded with a "thanks". LordVankous further admitted the praise motivated LordVankous to keep working on the idea. (Figure 10)

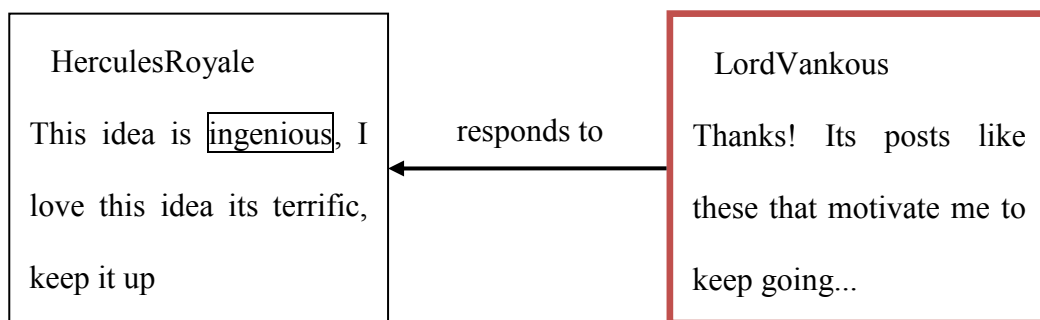


Figure 10. Interactions between HerculesRoyale and LordVankous

Another example is in the thread "New Card Idea: The Demolitionist" by MysticalArcana. bouncyball2002 asked for a permission to add the card idea into his/her own thread<sup>6</sup>. MysticalArcana was grateful for bouncyball2002's action. MysticalArcana continued the comment with the affirmation to that the "positive support and feedback" were an encouragement and attraction to MysticalArcana. (Figure 11)

<sup>6</sup> bouncyball2002 made a list, wishing to make good ideas well-known in the forum.

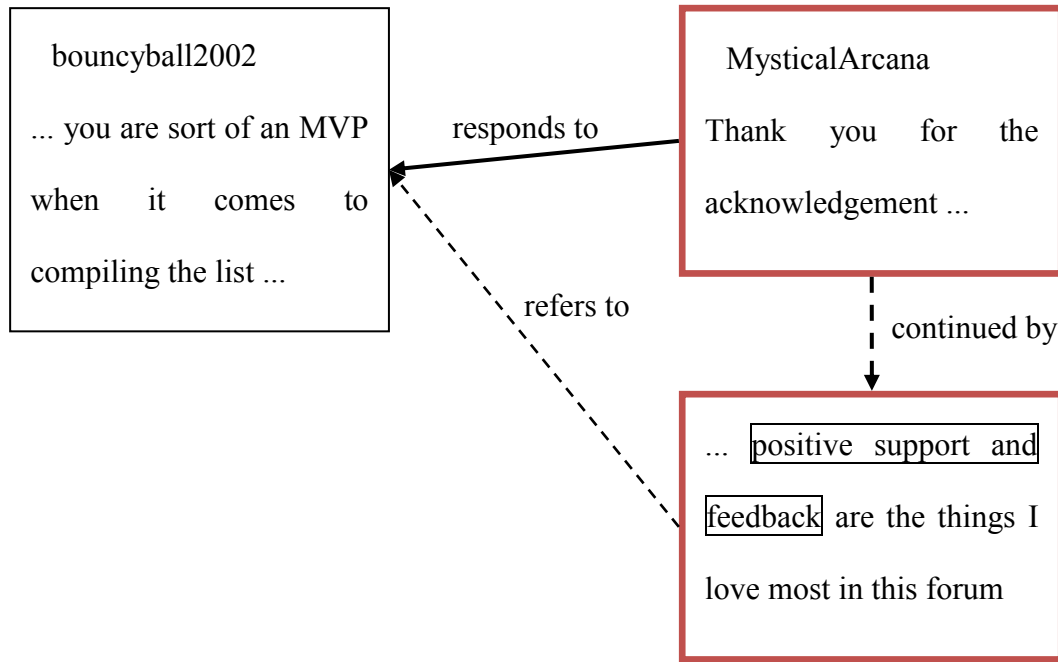


Figure 11. Interaction between bouncyball2002 and LordVankous

#### 4.2.2 Advice

In terms of advice, it is related to the concept of "free revealing". Getting advice is the main purpose for people to expose their ideas freely. (vonHippel, 2005) In "Ideas & Feature Requests", the community members treasured both positive and negative opinions. The advice was often related to card balancing. As presented in Table 7, some members remarked the flaws and probable directions (e.g. LigiMeon7). Some members straightly gave the numbers (e.g. Siddmaster, NightmareX, and Dycrno). Some members asked a series of questions to help the idea creator clarify the thought (e.g. Jibreellopez).

Table 7: Replies with Advice

Username	Post
LigiMeon7	... The card is pretty complex with two unique abilities and then she turns to attack the cards which are attacking her. This will be tough to program so you might want to remove the latter. This is very powerful atm. With high, splash damage and moderate health, she can become unstoppable ...

Username	Post
Siddmaster	... make the cost 5 or 6 ... make an extra 0.5 seconds ... This would balance it to become a riskier but potentially more rewarding spell. ...
NightmareX	... A cost around 5 elixir and moderate rate of 4 hits per kill should balance out counters and effective targets. ...
Dycrno	How about instead of splash damage, every consecutive attack on a single target deals say, 30 more damage than the previous attack (stacks up like a mobile inferno tower)
Jibreellopez	The Range? Fire Spirits have lower range than Zap, so what about Shock Spirits? Zap doesn't do splash ... If your thinking about spawning 3 how would that work? Would the Stun add up? Or do they all hit the same target for a total of 1-2 Seconds since Fire Spirits hit simultaneously...

The typical interaction is like Figure 12. In the thread "New card idea: Dragon Lancer" by Archmage101, Hawkecrail advised about hitspeed. Archmage101 responded to Hawkecrail's concern and promised to modify the figures. Then, Archmage101 lowered the hitspeed. Although Archmage101 did not fully adopt the advice, the advice was an inspiration, giving a perspective to considering the idea.

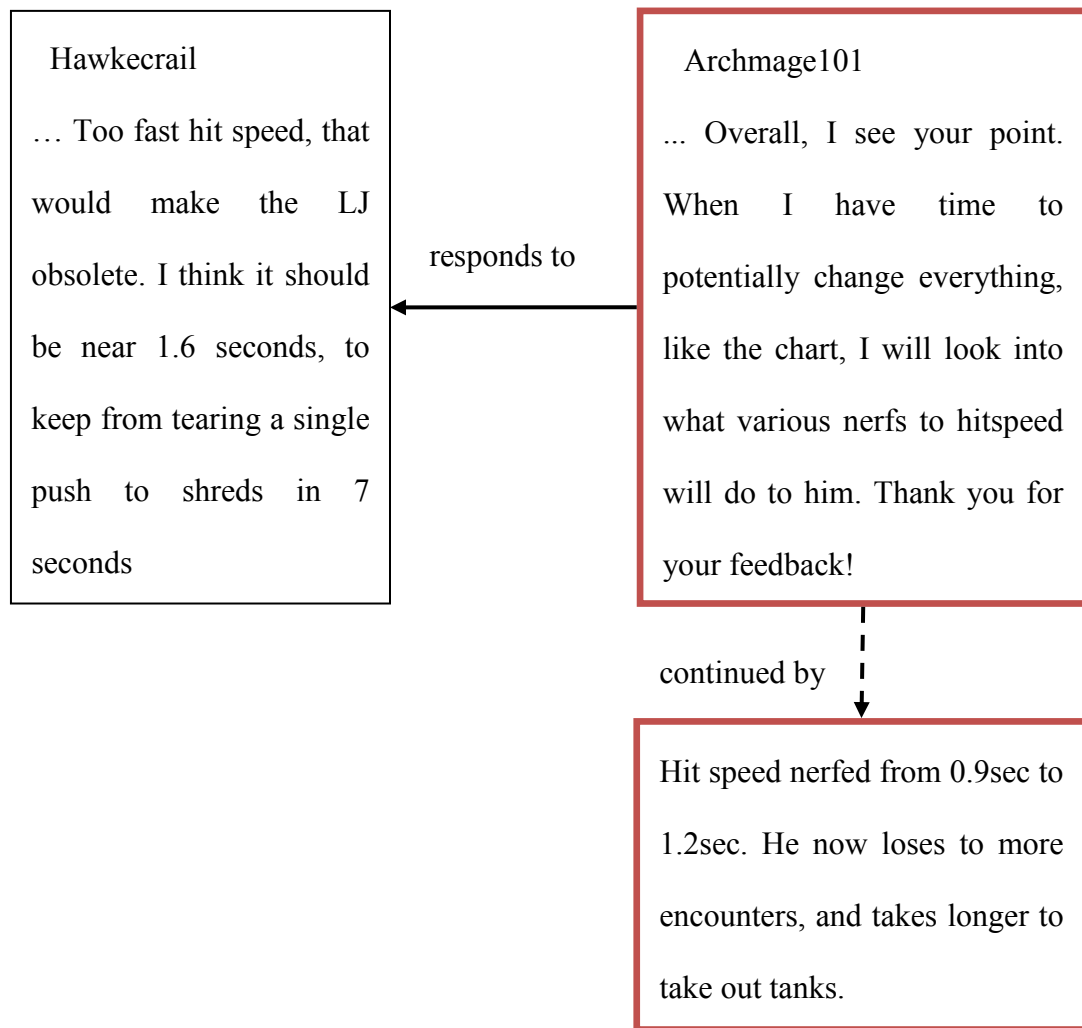


Figure 12. Interaction between Hawkecrail and Archmage101

How does advice bring out positive effect on motivating the members? Take the thread "New Spell Card: Sacrifice" by TheOneTheyCallSmasher for example. silversnake33 gave advice about the hitspeed. The suggestion was quite fresh to TheOneTheyCallSmasher. TheOneTheyCallSmasher appreciated the advice and promised to consider it. On the next day, TheOneTheyCallSmasher fixed the hitspeed based on the opinion.

Figure 13 depicts the interaction. TheOneTheyCallSmasher particularly acknowledged the change was inspired by silversnake33. The behavior could encourage more advice because the members knew that their effort would be respected and valued.

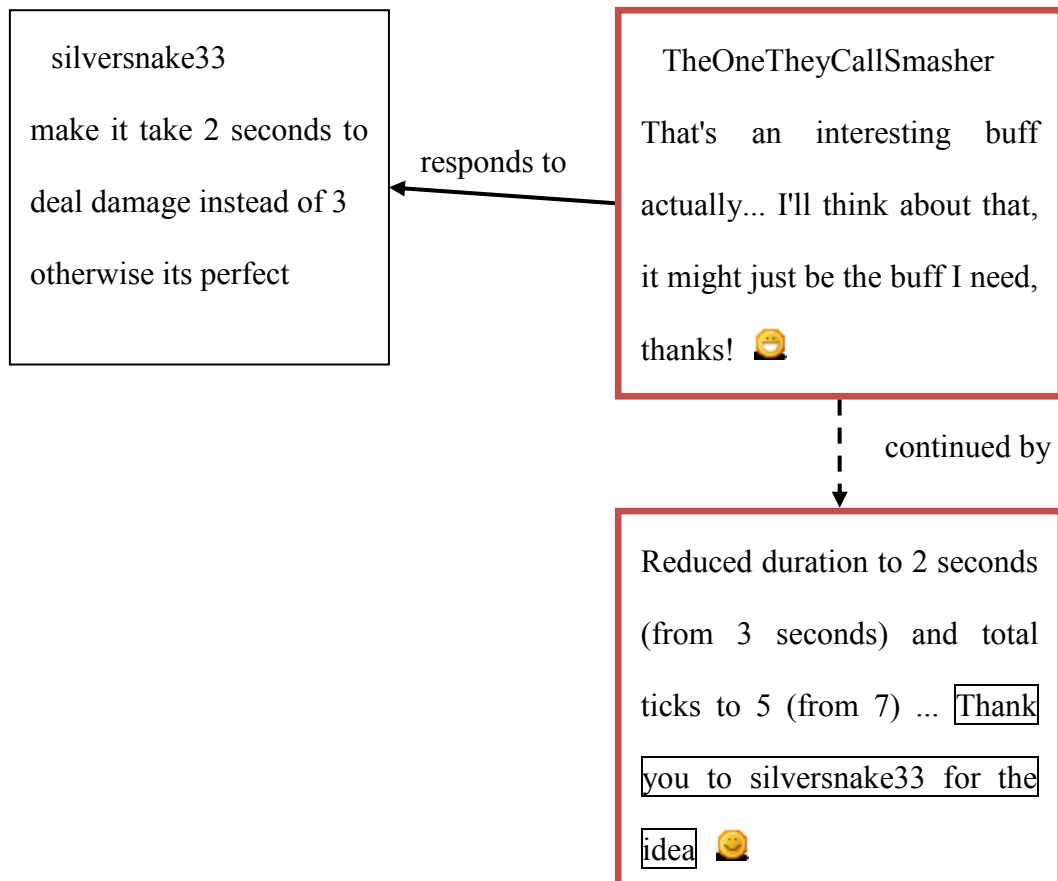


Figure 13. Interaction between *silversnake33* and *TheOneTheyCallSmasher*

Advice includes supports. Some members would provide lore, picture, or tables directly. In the thread "New card idea: Dragon Lancer" by Archmage101, TheDankPrince made 2 tables. (Figure 14) One table contained every column showed in card information. Another one showed the change of hitpoint of each level. The tables helped Archmage101 balance the card information. And they were put to the original post to support the idea.


**TheDankPrince** o  
 Banned  
  
 Join Date: Oct 2016  
 Location: England, UK  
 Posts: 5,035

Table of stats!  
  

Elixir cost	Troop count	Range	Targets	Hitspeed	Damage (% of enemy hitpoints)	Crown Tower Damage (% of tower hitpoints)	Movement speed	Deploy time
4	X1	Melee	Air + Ground	0.9sec	25	10	Fast	1sec

Level	Hitpoints
1	574
2	631
3	694
4	763
5	839

  
 Are you sure you want this 4 elixir troop to target air, though? He deals large amounts of single target damage after all.

Figure 14. Screenshot of the Post by TheDankPrince

Supports would trigger interactions like experience sharing or information exchanging. Figure 15 illustrates the discussion to the support. In the thread "New Card Idea: Meet 'The Outlaw'" by Sammydict, gendgibson made a table for the outlaw. JKBeast18 asked gendgibson for the tip to make a good table. Then, a discussion started to share information about good tools to make a statistics table.

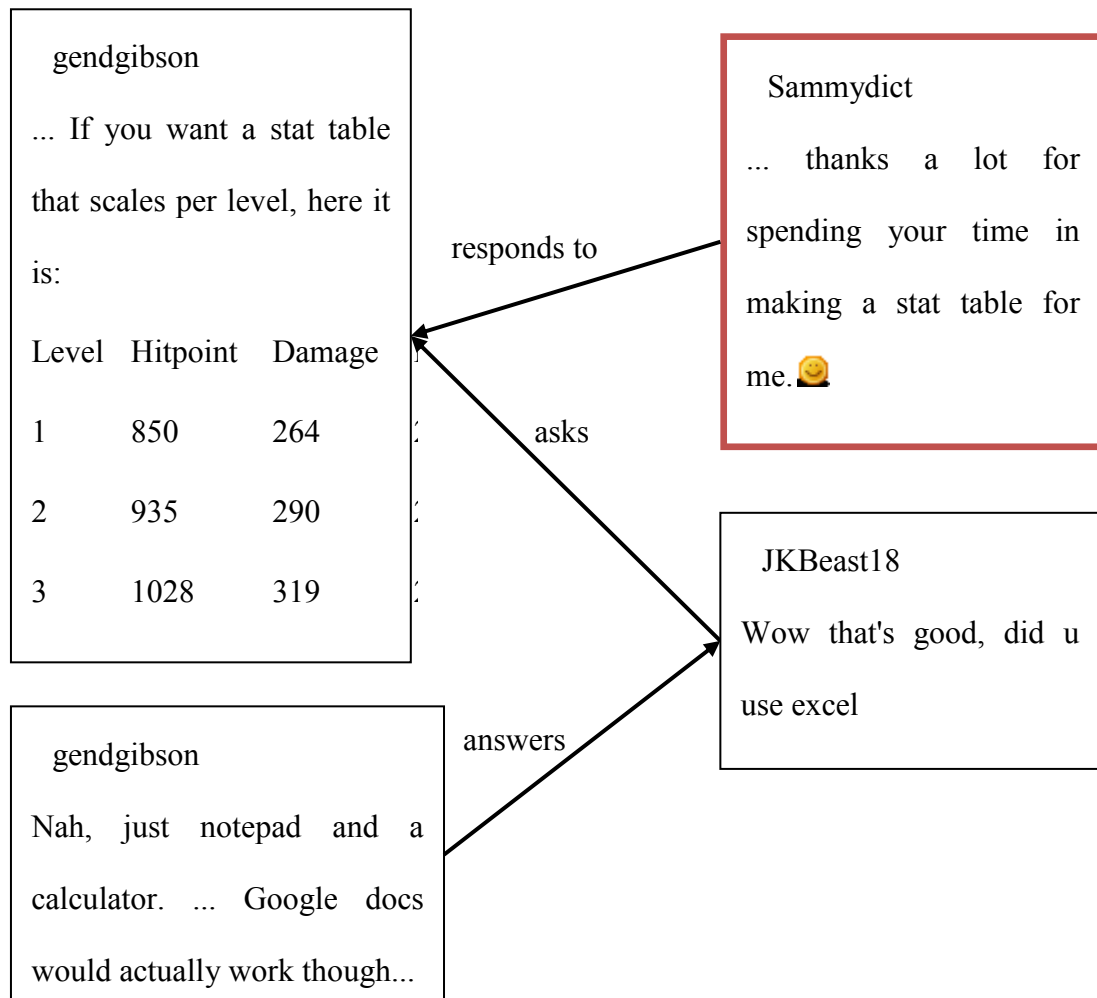


Figure 15. Interaction among gendgibson, JKBeast18, and Sammydict

The "praise" and "advice" were welcomed by the community members. "Praise" made the members knew the ideas were liked by the community. The idea creators proved the praises were important motivations. When it became a part of the community culture, more and more members would be enthusiastic about creating and sharing their ideas. "Advice" would help the idea creators sharpen the ideas. The support eased the pressure of creating a good idea. As long as the idea was innovative, it would get the aid from the experienced members. The replies are the encouragement and attraction to the community members.

### 4.3 Leadership

The leadership in "Ideas & Feature Requests" was consisted of "lead members" and "moderators". Lead members were active and gained the fame from most of the community members. According to the previous research, the leadership affects community members' satisfaction and the community culture.

#### 4.3.1 Lead Member

Owing to their activeness and reputation, they could influence the community culture. In the forum, NightmareX was one of the notable lead members. In the thread "A new rare card for Frozen Peak - the Yeti" by TheDankPrince, the appearance of NightmareX excited TheDankPrince.

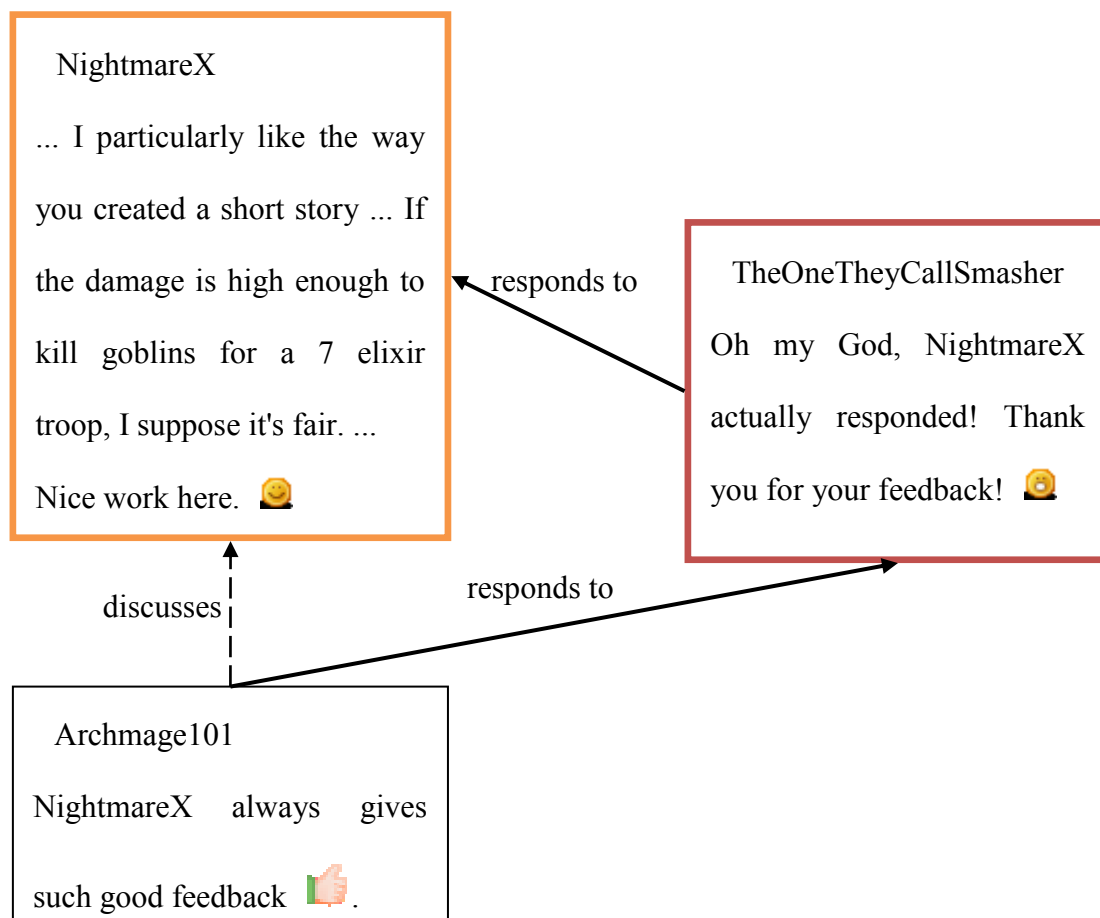


Figure 16. Interactions among NightmareX, Archmage101 and TheOneTheyCallSmasher



In Figure 16, NightmareX<sup>7</sup> left a concrete comment. TheOneTheyCallSmasher responded with "Oh my God" to show the excitement. Archmage101 responded to TheOneTheyCallSmasher to discuss the comment by NightmareX. The word "always" assured the reputation of NightmareX. The comment by NightmareX cheered up TheOneTheyCallSmasher.

#### 4.3.2 Moderator

The other leaders, moderators, were assigned by Supercell. The community members regarded them as the official representative. They were also the precious channel to deliver the ideas. They were there usually to maintain the order of the community, addressing the posts violating the rules. In some conditions, they would show up in the inspired idea threads. It was quite rare, but their appearance indicated the possible application of the idea. So the members had many different reactions to the moderators. The thread "New Card Idea: Meet 'The Outlaw'" by Sammydict successfully attracted a moderator, Holps. Holps thought the outlaw was a good idea and suggested an outfit for it.

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<sup>7</sup> NightmareX's reply is in the orange box. In the thesis, the responses by the lead members and the moderators would be put in the orange boxes.

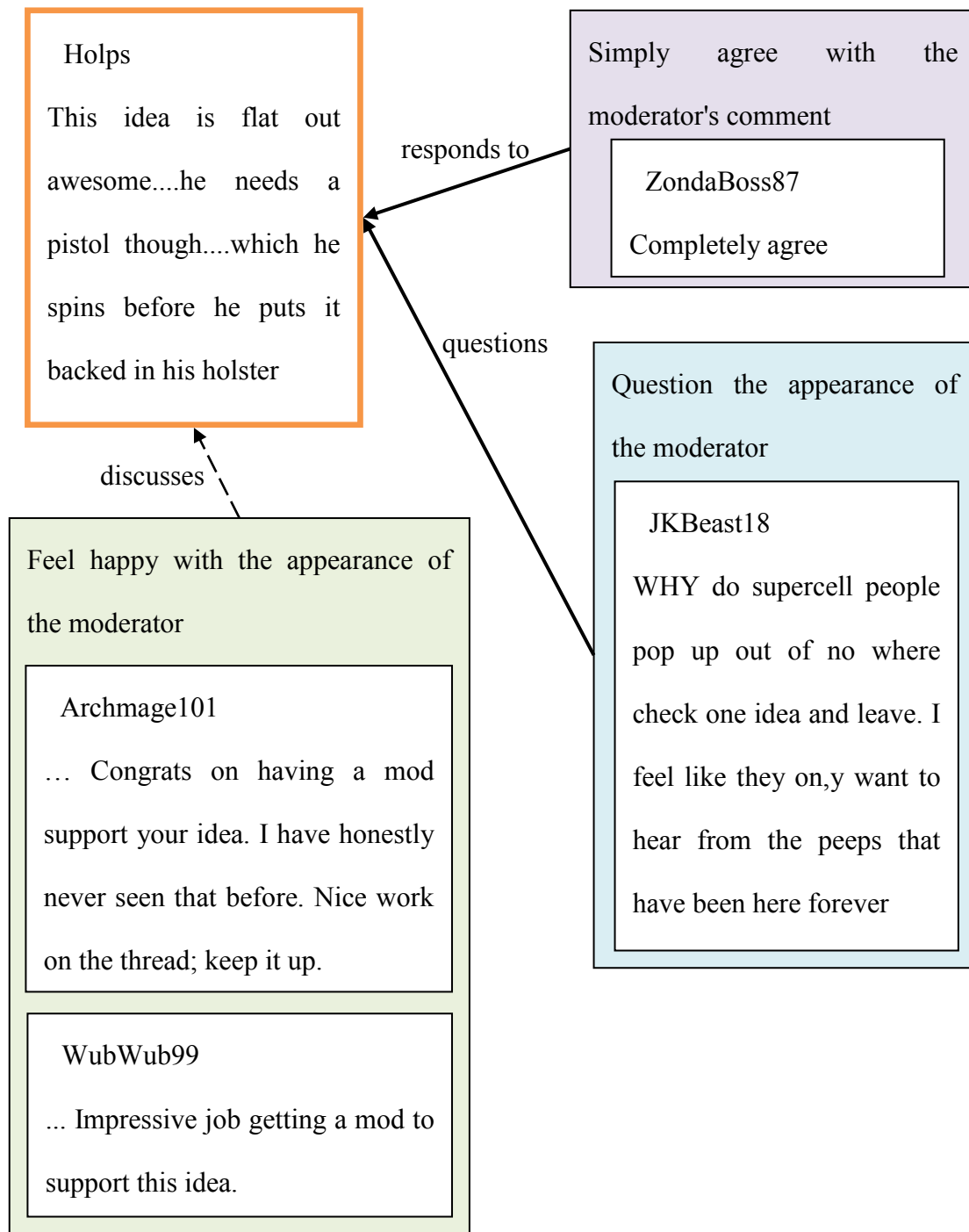


Figure 17. Reactions from the Community Members after the Comment by the Moderator Holps

Figure 17 shows the reactions by the community members. The reaction in the purple box did not clearly show the emotion. ZondaBoss87 responded to the moderator with only "Completely agree". ZondaBoss87 seemed to have no special feeling to the appearance of the moderator. The reaction in the blue box revealed the doubt to the moderator.

JKBeast18 questioned if the appearance of the moderator could guarantee the delivery of the members' voice.

Nonetheless, many members were happy with the moderator's comment. In the green box, the community members discussed the moderators cheerfully. Archmage101 hinted a moderator's comment was rare and symbolic. The comment by WubWub99 expressed that a moderator's comment was an indicator of a good idea.

Sammydict was happy with the appearance of the moderator. Sammydict used "achievement", "elated" and "felt good" to the comments mentioned Holps.

*"... his compliment really made me feel elated"*

*"... it really felt good that a mod liked my idea."*

*"... to have a Mod like and support it is quite an achievement sort of a thing for me here."*

For Sammydict, the moderator's comment was a huge encouragement.

The reactions to moderators are found in the thread "Card Idea: Fire Maiden" by NightmareX as well. The thread had the comment from the moderator, LachNessMeownster. In Figure 18, LachNessMeownster said that the idea was great and would convey it to Supercell. The moderator's reply thrilled the community members. bouncyball2002 revealed the excitement and congratulated NightmareX. Also, NightmareX mentioned "feels great" and "happy" to the moderator's comment. NightmareX further said the comment might have the effect to bring back some members who were no longer active in the forum.

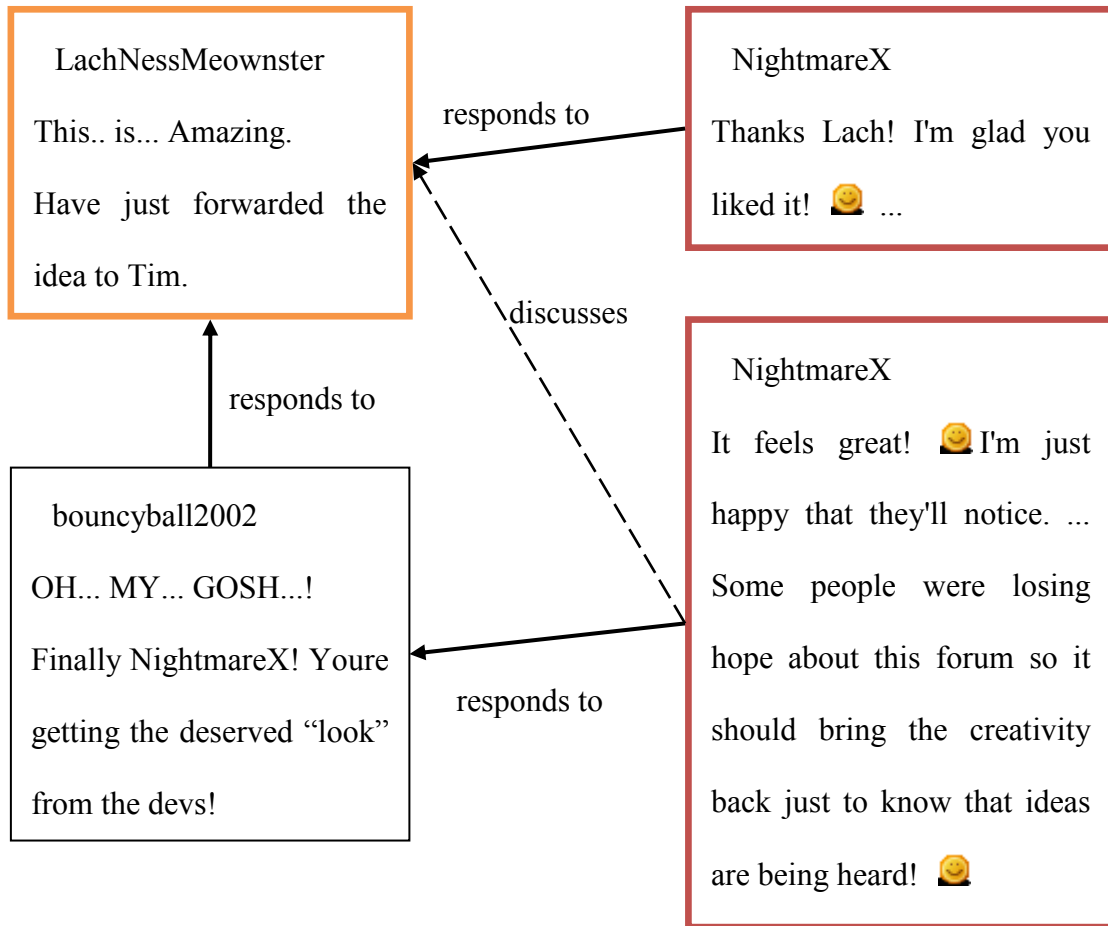


Figure 18. Interactions among LachNessMeownster(Moderator), bouncyball2002 and NightmareX

Moderators were an indicator of good ideas. The effect was shown in the thread "New Legendary Troop Card - The Ice Phoenix" by LigiMeon7. LigiMeon7 planned to ask advice from Coloradokiwiwiboy. But Coloradokiwiwiboy found the idea before LigiMeon7 informed. The interaction presents in Figure 19. Coloradokiwiwiboy specified "followed Lach<sup>8</sup>". The comment proves the influence of the moderators. The moderators could increase the exposure of good ideas. They also served as a sign of good ideas.

<sup>8</sup> The moderator LachNessMeownster

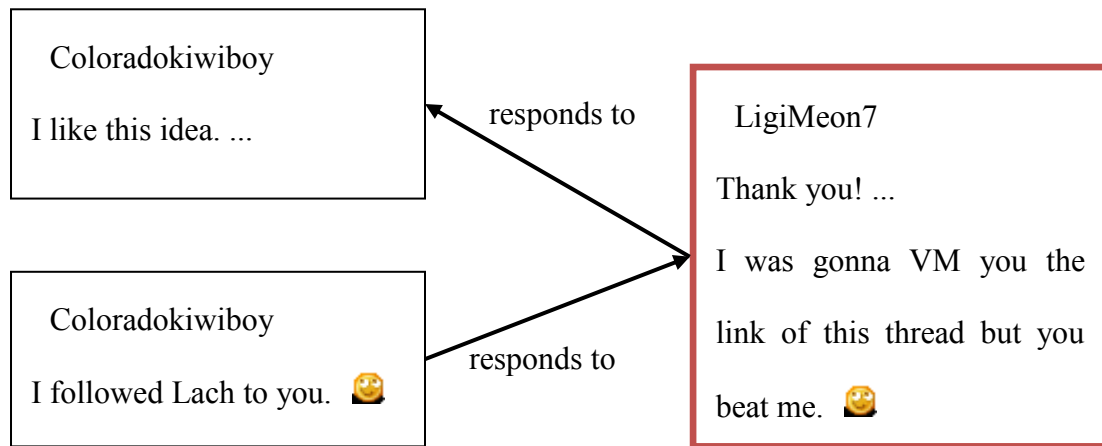


Figure 19. Interactions between Coloradokiwiiboy and LigiMeon7

Overall, the leaders could effectively encourage the community members. The lead members gave very comprehensive comments, pointing out strengths and weaknesses of ideas. The comment style could represent the culture and preference of the community. The members would be motivated by the lead members because of the precious advice. The reputation of the lead members might stimulate the community members to be as good as the lead members. Or they might hope to get the feedback from the lead members. In contrast, the moderators from Supercell were seen as the "official stance". Their emergence proved Supercell watched the forum and the ideas. The moderators often left short comments, and most of them were praise. Thus, their appearance signaled the ideas were good and practicable. It also meant that their ideas had the chance to be used in Clash Royale. The chance efficiently encouraged the community because it realized the belief of participating the community.

To sum up, emoticons and humor were the presentations of enjoyment. The community members liked to add them to the end of admirations or appreciation. They strengthened the enjoyment of reading the idea or receiving good feedbacks. The negative attitude could be reversed to a friendly feeling because of the smiling emoticons. Moreover, remarkable types of feedbacks are "praise" and "advice". The praises are an important

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power to encourage the members. It formed a warm atmosphere so that everyone is not afraid of revealing their ideas. Also, the advice is a significant force to push positive interaction and discussion. It not only sharpened the ideas, but also improved the members' skills to post an idea. Lastly, the leadership comes from two kinds of members, the lead member who are active and respectable in the community and the moderators who are the representatives of Supercell. Both of them could excite the community members. But the moderators cause more notice.

## 5 Discussion

The chapter discusses if the analysis results could answer the research question. The answer is organized by the research model (Figure 5) and the previous research. The chapter also elaborates the modifications to the research model and the additional findings.

### 5.1 Findings

The research question is **"What are the motivations driving players to participate in mobile game innovation process with the game creator?"** Motivations are the main topic of the thesis. It contains enthusiasm, inspirations, and encouragements. After the data analysis, each factor shows its power to motivate the community members in the forum.

First is enjoyment. The community members would not contribute to the online community without enjoyment. (Ho &Huang, 2009; Hsu &Lu, 2007) The enjoyment was uncovered by emoticons and humorous posts in the forum. Emoticons were often attached at the end of a sentence. Humor was usually linked to the lore or image. They could be seen as a reflection of delight. Given that they often appeared in the posts of admiration or thanks, they enhanced the strength of admiration and gratitude.

Secondly, feedback is another motivation. Getting feedbacks is particularly important for the members. It was the main reason to share their creations. The major types of feedbacks are praise and advice. The praises encouraged the members to keep upgrading the existing ideas and creating new ones. The advice eased the pressure to make a well-rounded thread meeting the community's preference. The members understood the feedbacks could improve the ideas. The popularity of an idea could attract more feedbacks. It would boost positive interactions like information exchanging. The interactions also supplied social supports and belongingness.

Finally, leadership has an impact on the community members. They left comments and supports to the members. Comments by both lead members and moderators were the effective encouragement to the members. The members also expected their emergence. Moderators seemed to cheer up the community more than lead members, while the activeness and supports of lead members were better than moderators. It is corresponding to the findings by Ho & Huang (2009). The satisfaction of the community members is influenced by the official leaders. Meanwhile, there was a member questioning the performance of the moderator. It reveals the leadership could also decrease the members' satisfaction if the leaders do not meet the members' expectation.

#### 5.1.1 Modification of Research Model

The original research model is not enough to describe the results. The results show some details that are supposed to be included in the model. Therefore, a few details are included in the model. The structure of the new model (Figure 20) is similar to the original one (Figure 5). One important difference is that "Praise" and "Advice" are increased under "Feedback". Among all kinds of feedbacks, they are pretty popular. Praise and advice are proved by the idea creators that they are effective to encourage them. Hence, they are covered in the model.



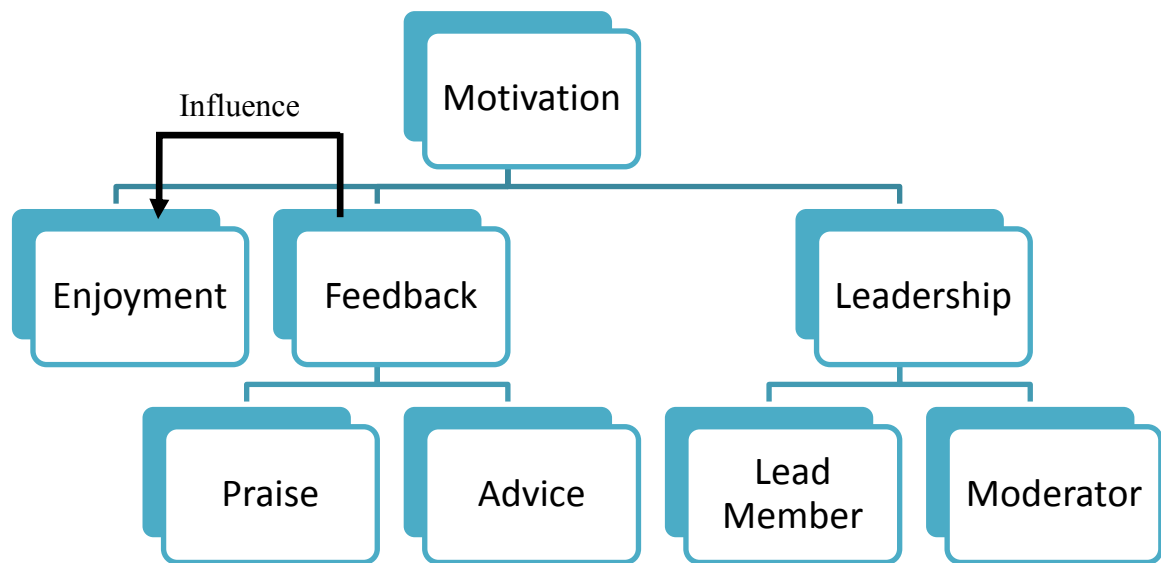


Figure 20. Modified Model of Motivations to Contribute to the Innovation Community

Another change is the arrow from "Feedback" to "Enjoyment". The feedbacks not only are the motivation to contribute, but also influence the enjoyment of contributing. The position of emoticons shows that praise and advice could create enjoyment. As Table 3 and Table 4, emoticons were often at the end of compliments and appreciations. Plus, the members like to leave "thanks" to respond to praise and advice regardless the length of the posts. As a result, an arrow from "Feedback" to "Enjoyment" is added to show the influence.

The last modification is the title of the model. The original title is "Research Model of Motivations to Participate User-Centered Innovation". "Participate user-centered innovation" is changed to "Contribute to the Innovation Community". After analysis, user-centered innovation is not the best interpretation of the forum. For user-centered innovation, the role of online communities is close to supportive. But in "Ideas & Feature Requests", the innovation was the supportive role. It gave the community members a topic and goal to interact. Thus, "contribute" is the better word to describe the forum.

### 5.1.2 The Role of "Ideas & Feature Requests" for the Clash Royale Community

Could "Ideas & Feature Requests" support the success of an online community? First is to examine the satisfaction of the community members. The factors (Figure 1) recommended by Ho & Huang (2009) are applied. Enjoyability is shown by the popularity of the smiling emoticons and humorous posts. Usefulness is detected from the advice. And involvement is not so obvious from the card threads. However, researchers claimed that the interactions in an online community, such as sharing information and experience, could feel associated. (Ho & Huang, 2009; Krogh et al., 2012) Therefore, involvement existed in the forum but required another research method to discover.

Secondly, the determinants set by Preece (2001) are applied. The aspects of sociability (Figure 2) was basically fulfilled. The purpose of the community was clear that Clash Royale implements the member-made ideas. The members helped each other raise the quality of the posts. One characteristic shared by the highlighted threads is that they provided many details about the idea. The detailed posts were preferred by the community members. Some members believed the high-quality posts could increase the chance to be implemented.

The number of active members is unable to be estimated in the thesis. The membership is shared in the thorough website. One thing is sure that the fandom is large, over 100 million installations on Android and ranking at 6 in App Store. So the community was supposed to be big, and so was the members joining the discussions in the forum. The policies in the forum were quite general. The forum did not restrict the members too much. The members were free to speak out the thought. The standard to judge the quality of posts was basically decided by the culture.

Notwithstanding, the thesis is not able to address the usability. The analysis results are based on observation. But the investigation of usability demands questionnaire or interviews, which was not conducted and addressed.

### 5.1.3 "Ideas & Feature Requests" and User-Centered Innovation

It is not so suitable to say that "Ideas & Feature Requests" was built for user-centered innovation. Among the types of the innovation, user innovation is the closest term for the forum. Firms invite consumers to participate the innovation process. The consumers believe the participation would be returned with what they need. (Flowers, Henwood, & ebrary Inc., 2010) The belief could be found in the forum. However, the participation of Supercell seemed not so sufficient and there was no acknowledgment for using ideas from the forum. So it is difficult to judge the opportunity of consumer involvement.

Crowdsourcing is partly suitable to describe the community. Supercell outsourced the task of developing new ideas to the community members. But there was no guarantee that the most popular or inspired ideas would be adopted or rewarded. Open innovation does not fit the community. Clash Royale is not open enough. Neither the source code nor the right to modify or test is accessible by the public. The future of Clash Royale is still held by Supercell.

### 5.1.4 Motivation Theories in "Ideas & Feature Requests"

In Literature Review, three motivation theories are presented, self-determinant theory (SDT), VIST model, and uses and gratifications theory (UGT). Among them, VIST model is not suitable for the thesis. The section would compare SDT and UGT respectively with "Ideas & Feature Requests" to see if the theories practiced.

The elements of SDT are competence, autonomy, and relatedness. Competence did not really expose in card idea threads. The members seldom compared one idea with another in the replies. However, there were some campaigns or contests in the forum which are excluded in the thesis. The threads implied the competence in the forum. But it was hard to see the competence in the card idea threads.

Relatedness was quite vague in the forum as well because the ties among members were weak. Despite that, the interactions and atmosphere had positive influence to relatedness, as elaborated in the section 5.1.2. Thus, the motivation to be involved in the community is still implied.

Autonomy showed in the forum. The members contributed to Clash Royale because of enjoyment and passion to Clash Royale. Plus, since there is no reward policy and strict rules, the extrinsic motivations less affected the members. They could feel more freedom in the community. They also took the responsibility to maintain the community atmosphere and the quality of the posts. As a result, there were some threads about making images and training newcomers.

Applying the forum with UGT, the first category, cognitive needs, is not so suitable. It is difficult to confirm if knowledge and information sharing was one of the main purposes of the community members. The behavior of knowledge-sharing existed, but it was not the most important purpose for the members. In contrast, affective needs are important to the members. It was shown in the results (4.1) and discussion (5.1.1) about enjoyment. The members liked to use emoticons and humor to strengthen their feeling about enjoying the ideas.

The personal integrative needs are partially displayed in the forum. Compliments were quite common and they could fulfill the personal integrative needs. But it is hard to confirm through the text in the forum. The problems also show in identifying social integrative and escape or tension-release needs. Via the posts, the further social interactions (contact through other message tools provided by the site other than leaving comments) could be found. For example, in the thread "New Legendary Troop Card - The Icy Phoenix", LJS2608 wanted to build a thread and asked for advice from LigiMeon7.

*"... I'm planning one of my own so i might contact you for an opinion. ..."*

And LigiMeon7 recommended using private message.

*"... Sure you can contact me anytime. I'd suggest using PMs for this ..."*

But the posts were not solid enough to affirm the needs were fulfilled. Escape or tension-release needs are even more difficult to recognize. From the codes, the posts related to escape or tension-release is not found.

### 5.1.5 Additional Findings

The analysis of the highlighted threads shows two factors being the determinants of success. First of all, the ideas were illustrated in a very detailed and well-structured way. Compared to the posts unappealing to the community members, the threads contained many subtitles, introduction, lore, statistics, pictures, and strategies. Not every part existed from the very beginning stage. They might come from members' advice or the idea creators' observation.

Take the idea thread "New card idea: Dragon Lancer"<sup>9</sup> by Archmage101 for example. The damaging mechanism was too unique and did not appear in both Clash Royale and the forum. The questions were repetitive. Archmage101 found the situation and added the FAQ section. The action was admired and the members could concentrate on sharpening the idea. It also reveals the second factor, listening to and interacting with the other members.

Secondly, the idea creators of the highlighted threads not only appeared a lot, but also tried to respond to every feedback and advice. No matter good or bad, they tried to be polite and maintain the community manners. The three idea creators left "thank you" to most of compliments and advice.

Another finding is from the thread "~NEW Spell~ Skeleton Spell"<sup>10</sup> by ButtMcCheeks. "Ideas & Feature Requests" could enhance the bond between Clash Royale

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<sup>9</sup> The thread had the most replies.

<sup>10</sup> The community members found that the idea was implemented in Clash Royale.

and the community members, especially when the idea was used. ButtMcCheeks response to the community member who possessed the skeleton spell card<sup>11</sup> in Clash Royale,

*"And if you don't like it... COME AT ME BRO!!!"*

It shows ButtMcCheeks wanted to protect the card because it was inspired by the skeleton spell. ButtMcCheeks also started promoting another idea. The application boosted the loyalty from the player and motivated the player to continue contributing.

However, not everything in the forum could positively push the community forward. Another discovery is about the disadvantages the leadership of moderators. Once the idea was in the "ruled-out list"<sup>12</sup>, the members might think the idea was hopeless and stop paying attention to it. For example, Zygarde123 was quite active in the thread "New card idea: Dragon Lancer" by Archmage101. After 4 months, Zygarde123 found the idea was ruled-out and said,

*"Sadly, I don't think it can be implemented. See the ruled out list."*

Since then, even though Archmage101 still worked on the dragon lancer, Zygarde123 did not leave comments to the idea anymore. The impact from the moderators did not directly stop the thread, but indirectly drag the members from the discussion.

Nonetheless, for visitors and newcomers, the community was quite attractive. The atmosphere in the forum was mild. The enjoyment emergence frequently everywhere. Usually, if they mention it is the first post, they would get a "welcome" from the veterans. For example, in the thread "New card the Pirate", Zygarde123 explained the forum rules to a newcomer and left a welcome at the end of the post.

*"... And, welcome to the Forums!"*

In the thread "New Card! The Brawler" by MightyCall, before leaving a comment to the idea, AlphaWizard125 express a welcome at the beginning of the post.

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<sup>11</sup> The skeleton spell was implemented as "Graveyard" in Clash Royale.

<sup>12</sup> The list was in a sticky post, displaying the ideas that would not be considered by Supercell.

*"First off, welcome to the forums!"*

The community members were willing to help each other. The culture would encourage newcomers to express their voice freely.

## 5.2 Theoretical Implications

A new model (Figure 20) is proposed in the thesis. It provides another aspect to analysis online community. Studies rarely discuss game online communities with user-centered innovation. The model provides a direction to investigate online communities. It is especially good at the communities collecting ideas and reports. Different from building a new relationship or knowledge sharing, contributing ideas often demands more creativity. It is the reason why the motivations are worth discovering. When adopting the model, "enjoyment", "feedback", and "leadership" are the first factors to be considered.

However, the model needs more tests to prove its validity. It is confirmed in the thesis that the model fits the forum similar to "Ideas & Feature Requests". The features and gameplay of Clash Royale might be the causes of the activeness of the forum. Therefore, the model should be examined in other communities practicing user-centered innovation. For example, "bug report" could be seen as a "transformation" of crowdsourcing. (The game creators outsource the quality assurance to the crowd.)

Moreover, there are few methods could effectively investigate an online community through texts. The thesis adopts observation as the main method. The word cloud and keywords provide a way to select what to study and analyze. The interaction network is practiced to draft the members' interaction. It helps to present symbolic behaviors.

## 5.3 Practical Implications

Not many mobile game communities have a space for innovation and new ideas. The thesis could help them start to acquire inspirations from the players. The results prove that the

purpose of the forum does not have an extraordinary difference in motivations compared to other forums. Thus, it is still possible for mobile game firms to start involving players in the innovation process.

As mentioned in the theoretical implementations, "bug report" could be seen as a practice of "crowdsourcing". Bugs are the most critical issue for a game creator. Before a game is released to the market, it is necessary to test and find as many bugs as possible. But it is impossible to achieve perfection at the stage. Public test is an effective way to fix the product. Thus, game firms should do their best to encourage players to report unpleasant gaming experience in order to improve the game.

Based on the model, it is suggested that game firms should try to tell players improving a game is an enjoyable process. The firms should also encourage interactions and discussions. If the players could be directly benefited from the interactions, they would believe the online community has the positive influence of the gaming experience. Then, they would like to contribute to the community. The reciprocity is an indicator of both a successful online community and user-centered innovation. (Krogh et al., 2012; Preece, 2001; Shah, 2006) Firms could collect information about how the game performs on different devices. They could get the solutions from players as well. Apart from the game industry, online communities for other industries could apply the model. The basic concept is similar.

## **5.4 Limitations and Future Research**

There are some limitations to the thesis. The thesis is not able to conduct interviews to further confirm the model. Interviews could provide different perspectives. The interviews with players could understand the whole story from start joining the community to post the first idea. Also, it is noticeable to understand if the community influences the members' private life. On the other hand, the interviews with the moderators could reveal firms'



policy and attitude to the online community. It could be affirmed what behaviors or inspirations they particularly appreciate and whether the strategy influences the community culture.

As mentioned in the section 5.1.4, the competence of SDT is not able to confirm in the thesis. However, in "Ideas & Feature Requests", the community members have mentioned participating in the competitions could greatly improve idea creating. It is an opportunity to compare with other ideas and to find out the members' preference. Also, the idea creator could explore a large number of good ideas at once which is a chance they barely have on the forum. Hence, investigating the competence could improve the model and understand the preference of a community.

The thesis discusses motivations with a more genetic view. To improve the model, the future research could examine the impact among the elements. In addition, the motivations could be further categorized by intrinsic and extrinsic motivations, by initial and continued motivations (e.g. Soliman & Tuunainen (2015)), or by different phases of the community (e.g. Fayard & DeSanctis (2005))

## 6 Conclusion

The chapter summarizes the evolvement of the thesis. The thesis goal is to explore the motivations driving players to participate the innovation process. It proposes a motivation model based on the previous research and analysis results. It analyzes the forum, "Ideas & Feature Requests", of Clash Royale community to verify the model. The chapter stresses the features of each section.

### 6.1 Research Summary

The importance of online community is to keep players' loyalty. (Su et al., 2016) Among many mobile game creators, Supercell chooses to manage its own communities. "Ideas & Feature Requests" successfully attracted many players. The forum collected innovations from players. The concept could be seen as a practice of user innovation. Gradually, a force was formed to influence the decision to Clash Royale.

Even though mobile game online communities are so popular, the studies for the realm are few compared to the hard-core game communities and the communities for other industries. Also, user innovation practiced in mobile game communities seems uncommon. But "Ideas & Feature Requests" proved the players' could bring novel value to the firm. Thus, it has the value to encourage the mobile game creators to embrace the fashion. The first step is to investigate why players are willing to contribute their creativity. The thesis tries to answer the research question: **What are the motivations driving players to participate in mobile game innovation process with the game creator?**

Literature Review assembles the articles and research that possibly answer the research question. The studies associated with mobile games, online communities, user-centered innovation, and motivations are covered. Firstly, the determinants of success of a mobile game are human-computer interaction, social interaction, and marketing.

(Bowman et al., 2015; Hallikainen et al., 2010; Merikivi et al., 2016; Park & Kim, 2013; Su et al., 2016) Online communities, as a space supporting the interaction, are a powerful pillar for games to support the social interaction.

Secondly, the features of online communities are reviewed. Researchers claimed online communities have the positive effect on the consumer loyalty and improvement of products. (Hagel III, 1999; Hagel III & Armstrong, 1997; Schau et al., 2009) One approach measuring the success of an online community is to examine the users' satisfaction. (Ho & Huang, 2009) Another approach is to investigate its sociability and usability. (Preece, 2001) They cover the members, environment and, support of an online community.

Next, user-centered innovation is inclusive. The thesis reviews the specialties of user innovation, open innovation, and crowdsourcing. The core of user innovation is to involve users in the process of innovation. The meaning of open innovation is to open the innovation process available to everyone. And the spirit of crowdsourcing is to take advantage of power from a "crowd" to collect solutions fast and accurately.

Finally, the motivation theories, SDT, UGT, and VIST model, are specified. The determinants of SDT are competence, autonomy, and relatedness. The UGT categorizes needs and is implemented to the research to social media. The VIST model is not suitable for the thesis. The thesis mainly adopts the concept of SDT and the relative studies. Several motivations are introduced as well, such as enjoyment, free revealing, and leadership. Literature Review serves as the base of the research model.

Following Literature Review, Methodology is elaborated. The research model combines the motivations to contribute to online communities and user-centered innovation. The element frequently appearing in two realms is enjoyment. For online communities and user-centered innovation, it is the initial and continued factors. (Hertel et al., 2003; Ho & Huang, 2009; Hsu & Lu, 2007; Krogh et al., 2012; Raymond, 2001) "Feedback" is emphasized in user-centered innovation as the demonstration of "free

revealing". (vonHippel, 2005) "Leadership" has a stronger tie with online communities. It is the main power to shape and decide the culture and future of online communities. (Ho &Huang, 2009) The research model is presented in Figure 5.

The data is downloaded from "Ideas & Feature Requests" of Clash Royale from the website Supercell Community Forum. The thesis only analyzes the card ideas since they are the majority of ideas. The data is filtered by several steps to select analyzable card idea threads. Three threads are picked as "highlighted threads". The analysis method for the data is designed based on content analysis. The data is imported into Atlas.ti. A word cloud is created to define keywords. Two rounds of coding are executed according to the keywords in order to mark players' interactions related to the elements in the research model.

Results present the players' interaction structured by the research model. The emoticons and humorous posts are regarded as the sign of enjoyment. The reply has two group, "praise" and "advice". They were the significant feedbacks and had the encouraging effect on the members. The final one is leadership from the lead members and the moderators respectively. The motivating effect from the moderators was bigger than lead members. They were taken as the channel delivering the members' expectation. But the lead members were more active and provided more aids to the members. Overall, the members were more influential to the community.

Discussion covers the findings, implications, and suggestions to the future research. Considering the findings, the analysis results assert that the model proposed by the thesis could answer the research question. However, the original model is not enough to illustrate the happenings in the forum. Hence, a few changes are made, as the new model in Figure 20. "Praise" and "Advice" are put to specify the significant groups of feedbacks in the forum. An arrow is put between "Feedback" and "Enjoyment". It shows that the feedbacks could influence the enjoyment. The "Contribute to the Innovation Community" takes the

place of "Participate User-Centered Innovation" in the name of the model. The forum is more community-oriented. Thus, the new name is more neutral and precise.

The results are examined with the previous research. The forum had the effect to support the community. It possessed the determinants of the sociability. But it is not possible to analyze the usability. Regarding user-centered innovation, it is not accurate to take the forum as user-centered innovation. Among the genres of user-centered innovation, user innovation could best describe the purpose of the forum. Crowdsourcing is partly suitable, while open innovation does not fit.

The analysis results could correspond the motivation theories. They confirm the elements of SDT, except competence. The competence probably existed, but it was not obvious in the card idea threads. About UGT, the results show the affective needs obviously. The others are not or partly found in the threads.

The additional findings are exhibited. The findings mostly come from the highlighted threads. Firstly, the reasons why they were more successful among thousands of threads. The reasons were detailed description and the frequent interactions with other members. Secondly, the moderators' action might cause discouraging to improve ideas. Overall, the community atmosphere was quite warm and energetic. Although not every finding has a direct relation to the motivations, they are worth to notice and have the potential to develop future research.

The analysis results affirm that enjoyment, feedback, and leadership are the motivations for people to contribute to an innovation community. The model used in the thesis demonstrates the motivations, the components of the motivations, as well as the influence of feedback on enjoyment. But the model requires more tests in other communities to raise the invalidity.

In addition, the thesis has some suggestions for implications and future research. For theoretical implications, the thesis presents a model to study online communities aiming to

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collect ideas and reports. It also provides a direction to study mobile games, online communities, and innovations. For practical implication, the thesis encourages mobile game creators to consider increasing the opportunity of players' involvement. It gives suggestions to firms for inviting users to participate the innovation process and improving the atmosphere of online community as well.

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